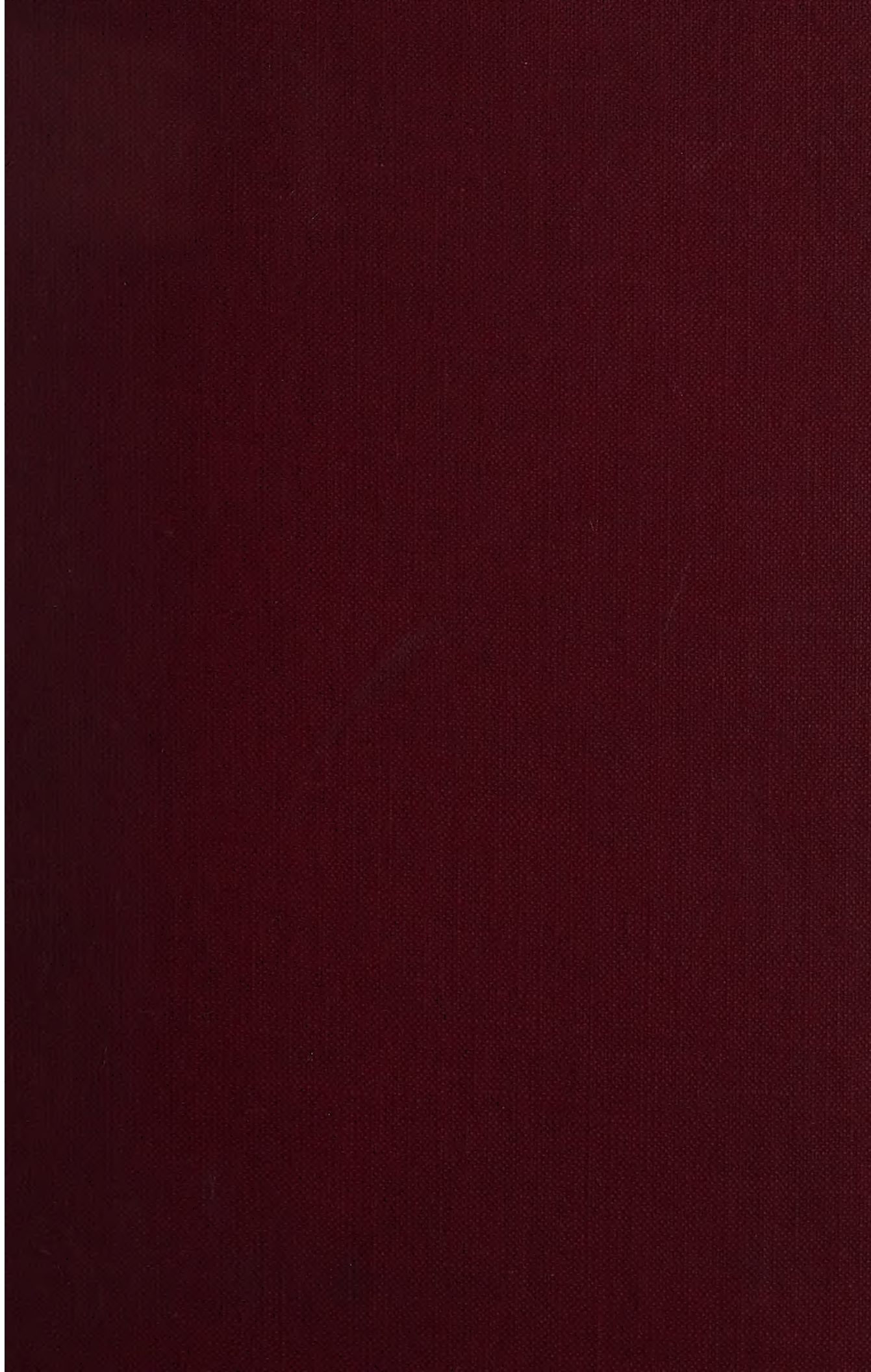
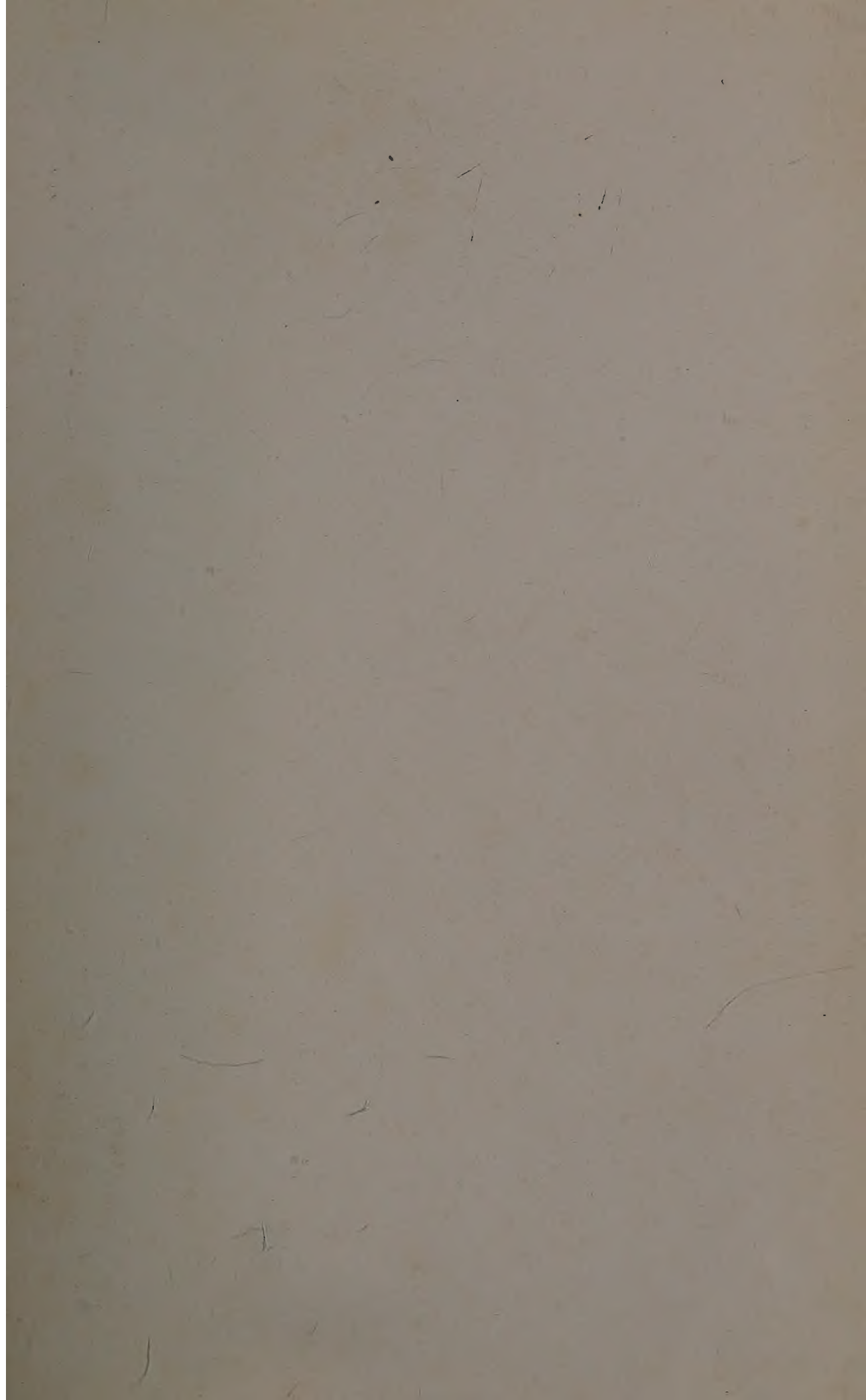






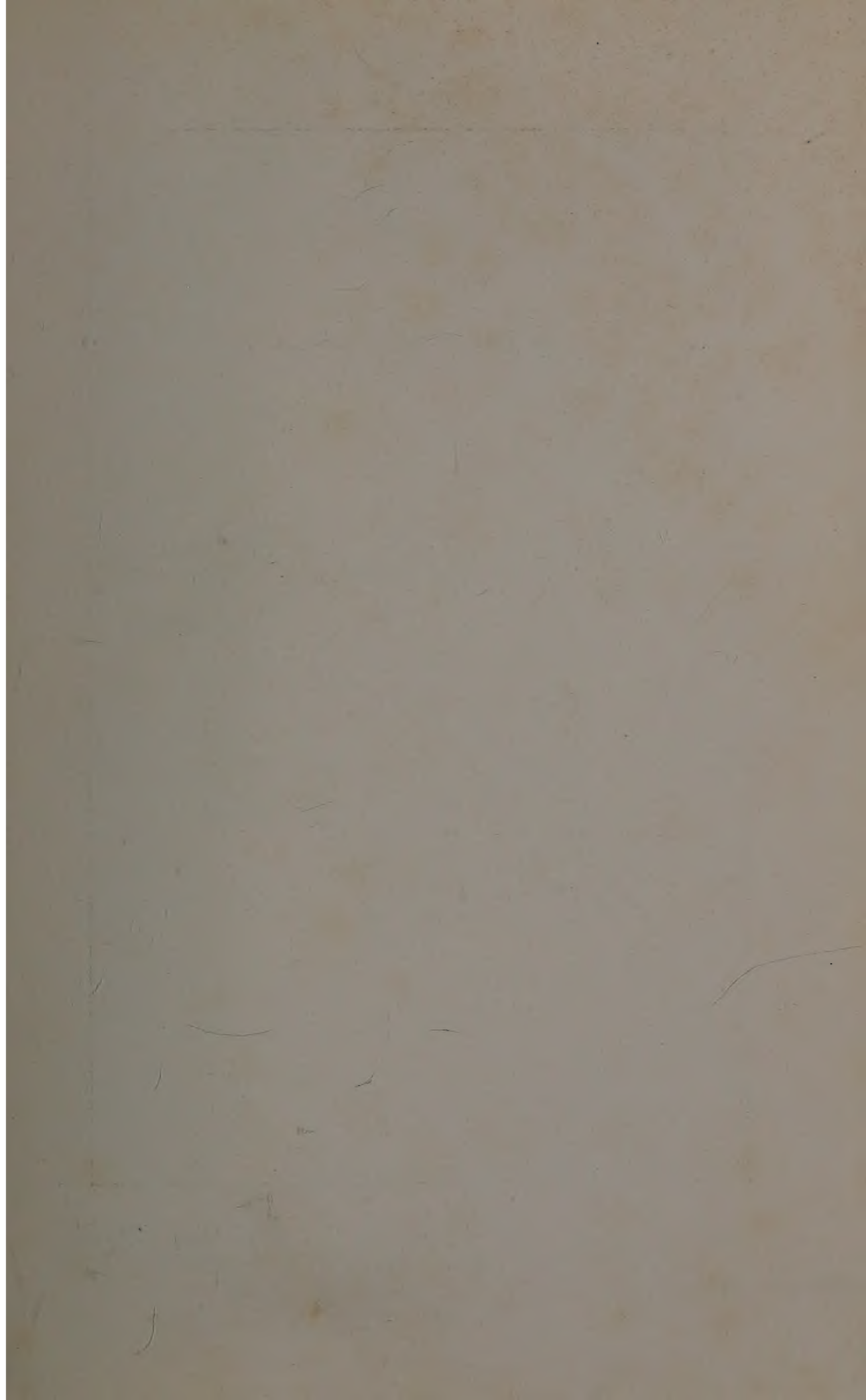




THE CAUSE AND CURE OF COLDS

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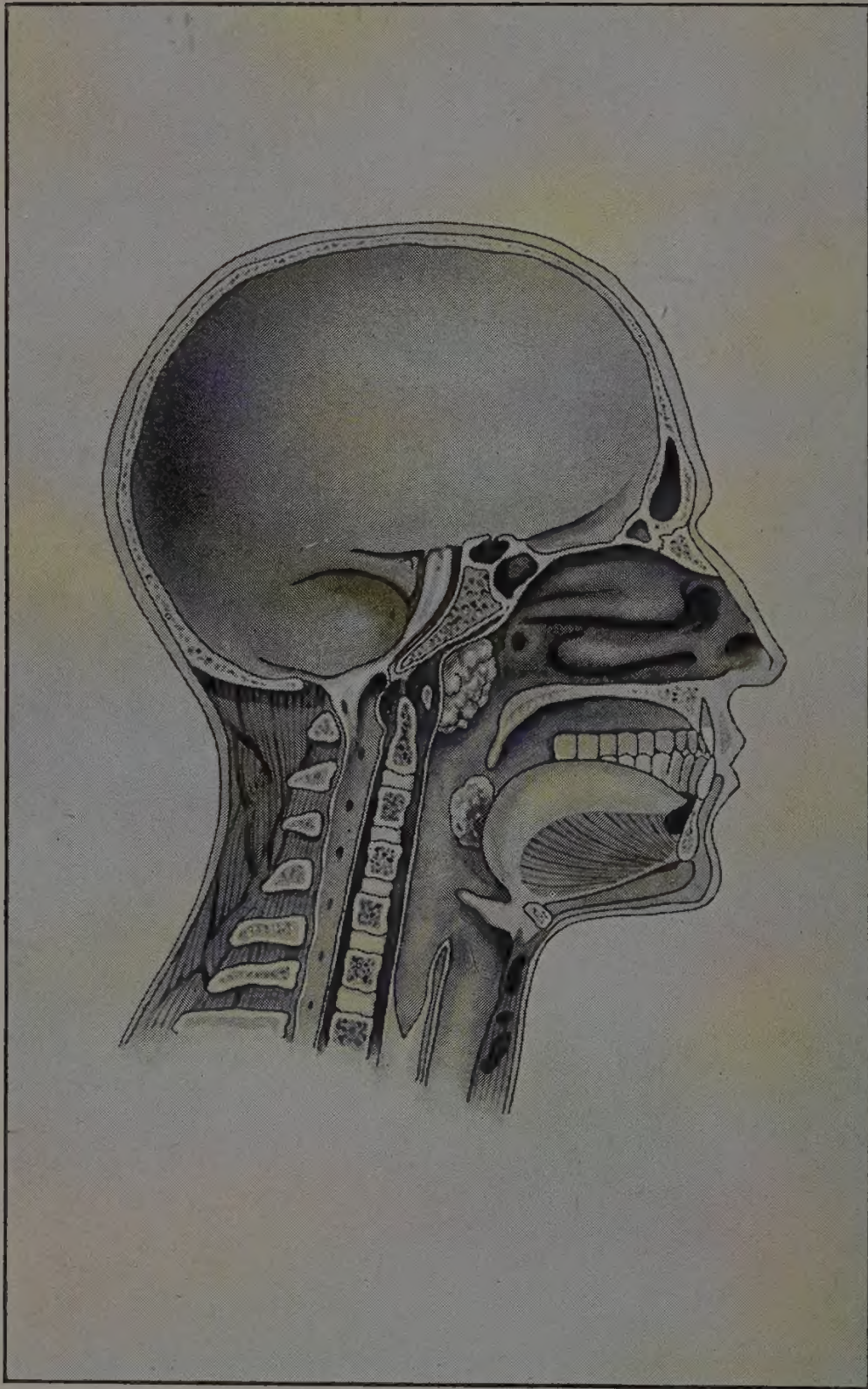


Figure 1—*Sectional View of Nose and Throat Showing Adenoid, Enlarged Tonsil, Sinus and Enlarged Turbinates*

THE CAUSE AND CURE OF COLDS

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SOCIETY, THE ILLINOIS STATE MEDICAL
SOCIETY, THE AMERICAN PUBLIC
HEALTH ASSOCIATION,
ETC.

ILLUSTRATED

Seventh Edition—Revised and Enlarged



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PREFACE

OF all the minor maladies which afflict the civilized races, the so-called common cold is undoubtedly the most widespread and distressing. Colds, constipation, and headaches constitute a trio of common afflictions which entail an enormous amount of suffering, and in addition are very largely preventable. About nine-tenths of these minor maladies, with their attendant social inconvenience and financial loss, could be prevented if the American people would but render themselves intelligent regarding the causes and treatment of these common ailments.

From a study of the best statistics available, it is my opinion that the average American citizen loses about one week of each year as the result of colds and headaches. This loss of time refers to actual absence from employment, and does not include an equal period, or more, in which efficiency is greatly reduced while the sufferer remains on the job. Common colds not only cause us inconvenience and produce an enormous financial loss, but they predispose us to more serious and disagreeable infections—at least, they many times do when they are not early recognized and properly treated.

Suppose a typical wage earner, whose average daily income can safely be estimated as five dollars, loses only three days a year as the result of common colds. If we estimate that there are in this country 20,000,000 wage earners who are thus affected each year, it will at once be apparent that there is a direct economic loss, due to colds, of not less than \$300,000,000, and this does not include the money spent by these sufferers for cold "cures" or for physicians' fees. I believe that another \$100,000,000 could be easily charged up to these items of home treatment and medical attention, making the grand total cost of colds among wage earners at least \$400,000,000. And this estimate does not take into account the expense for treatment, medical attention, and so on, to that vast group of non-wage earners, embracing upward of 80,000,000 persons, which amounts undoubtedly to at least another \$100,000,000. It thus becomes apparent that the American people suffer an economic loss of one-half billion dollars a year as the result of this one minor malady—the so-called common cold.

But the money lost as the result of colds is the smallest of all the dire consequences of our ignorance concerning their cause, prevention, and treatment. The neglect or faulty treatment of a cold often leads to chronic colds in the head, or sinus infection, not to mention the fact that repeated colds

may be concerned in laying the foundation for such deadly diseases as pneumonia and tuberculosis, as well as serious disorders of both heart and kidneys. Repeated common colds sap the vitality and predispose one, through this lowering of the resistance, to all other forms of infection and disease.

It is a well-known fact that both mental efficiency and physical capacity for work are greatly lessened in the case of those who are suffering, or recently have suffered, from a bad cold. An uncured cold not only produces untold inconvenience in that it often seriously interferes with the fulfillment of business, professional, and social engagements, but it is also a health menace when carried about in public—at least this is true of all those forms of common colds which belong to the contagious group.

And so there are many reasons—aside from those of personal comfort and convenience—why the sufferer from a severe cold should go to bed. Such an individual is not only more or less of a health menace to those with whom he mingles, but he is also quite incapacitated for doing himself any special honor in either social realms or business circles.

It has been my purpose in the writing of this manual to offer practical and scientific suggestions concerning the home management of colds. It is

not intended that this advice shall supplant the physician, but rather that it shall afford help in carrying out, in the home, the instructions of the medical adviser. While this book gives the latest scientific information respecting the known causes and the approved management of colds, nevertheless there remains much to be discovered respecting the cause of common colds.

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CHAPTER I

WHAT IS A COMMON COLD?

OF all the common, minor maladies afflicting the civilized races, probably none are more troublesome and more completely misunderstood than common colds, while they certainly occasion more and greater inconvenience than all the rest of the minor maladies put together. By far the majority of our population, young and old, fall victims, one or more times each year, to a cold of more or less severity, in duration lasting anywhere from two or three days to two or three weeks, with after effects hanging on even longer.

COLDS TO BE TAKEN SERIOUSLY

The time has come for intelligent people to take common colds seriously, for when they are severe and frequent—when they manifest a tendency to “hang on”—they may lay the foundation for numerous chronic diseased conditions of both the nose and throat.

Severe colds, when persistent and neglected, may do much toward predisposing certain weakened and debilitated individuals, who possess a

low degree of vital resistance, to bronchitis, pneumonia, pleurisy, and even tuberculosis.

In the use of the term "colds" we usually refer to an acute infection or inflammation in the head, particularly affecting the nose, and accompanied in the early stage by sneezing, chilliness, shivering, fullness in the head; and later by muscular pains, dry skin, constipation, impairment of the senses of taste and smell, varying discharge of mucus (becoming purulent in two or three days), more or less sore throat, sometimes cough, hoarseness, headache, fever, and so on. A cold usually runs from seven to ten days. The patient is often taken suddenly with sneezing and chilliness, and this is frequently followed by a state of general feverishness. This same group of symptoms which marks the early stages of a cold, also ushers in numerous infectious diseases, including diphtheria, typhoid fever, smallpox, scarlet fever, whooping-cough, measles, pneumonia, and influenza.

"Chills and fever" constitute a group of symptoms which mark the beginning or early stages of practically all the common, acute, infectious diseases. All children exhibiting symptoms of a "fresh cold" should be taken out of school and properly isolated from the family until either time or the doctor pronounces them free from some contagious disease. In the case of either

children or adults all supposed colds should be taken seriously and given prompt attention when they are accompanied by fever, generalized aching, or unusual physical prostration.

CLASSIFICATION OF COLDS

Among the questions constantly asked by our patients who are frequent sufferers from colds, are: "Doctor, what is the real cause of my bad colds? Why do I catch cold so often? What makes it hang on so long?"

A somewhat different answer must be found for this question in the case of almost every patient, but observation and study have led me to believe that there are six groups of so-called colds. The vast majority of common colds may be grouped under one of the following heads:

1. *Colds with fever*—constitutional or the "flu" type of colds.

2. *Colds without fever*—the annual or acute infectious type of colds.

3. *Recurrent colds*—colds resulting from sinus or other chronic nose and throat infections—the chronic catarrhal type of colds.

These three types of colds are certainly contagious. They are the colds that sometimes "run through the family." They are undoubtedly caused by some form of living organism, probably

one that is too small to be seen by our present-day microscopes. At any rate, they represent the contagious group of colds.

4. *Deficiency colds*—the coryza type of colds, resulting from calcium deficiency or diminished alkali reserve of the blood—acidosis.

5. *Irritation colds*—colds resulting from dust, diminution of the nasal secretions, or lack of humidity.

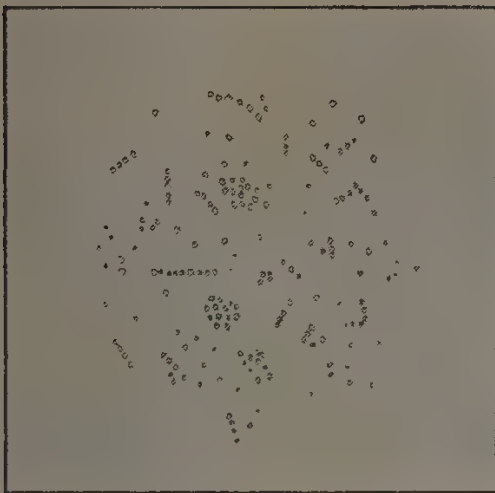
6. *Hay-fever colds*—summer colds—so-called rose-fever colds.

These last three types of colds are non-contagious. If any living organism is concerned in their production, such organism must play a secondary role.

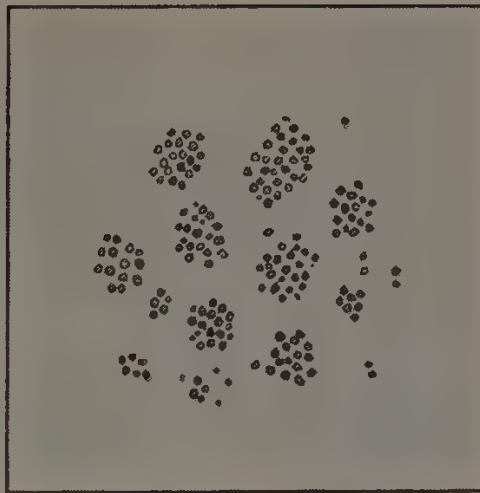
Perhaps we should also include a seventh group which might be called *combination colds*. We certainly do see colds in which there is a combination of either No. 1 or No. 2 and No. 5, and we may even have a combination of the hay-fever type of cold with some other type. It is these combined types of colds that present the greatest difficulty when it comes to working out a satisfactory and effective plan of treatment.

THE INFECTIOUS COLDS

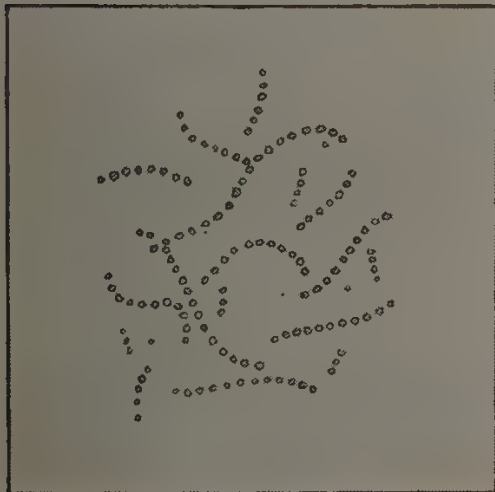
The fact that one group of colds is of an infectious nature is further suggested by the immunity



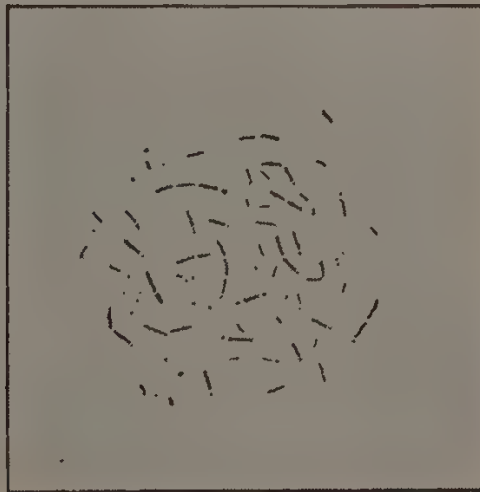
INFLUENZA GERMS
(*Pfeiffer's Bacillus*)



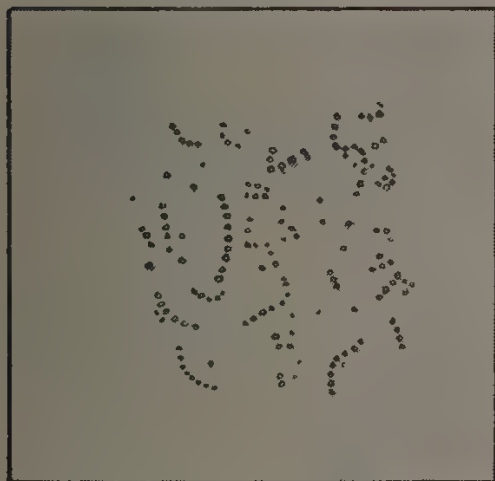
COMMON PUS GERMS
(*Staphylococcus*)



RARE PUS GERMS
(*Streptococcus*)



GREEN PUS GERMS
(*Pyocyanus*)



DIPHTHERIA GERMS
(*Klebs-Löffler Bacillus*)



PNEUMONIA GERMS
(*Friedlaender's*)

Figure 2—Group of Germs Causing Colds

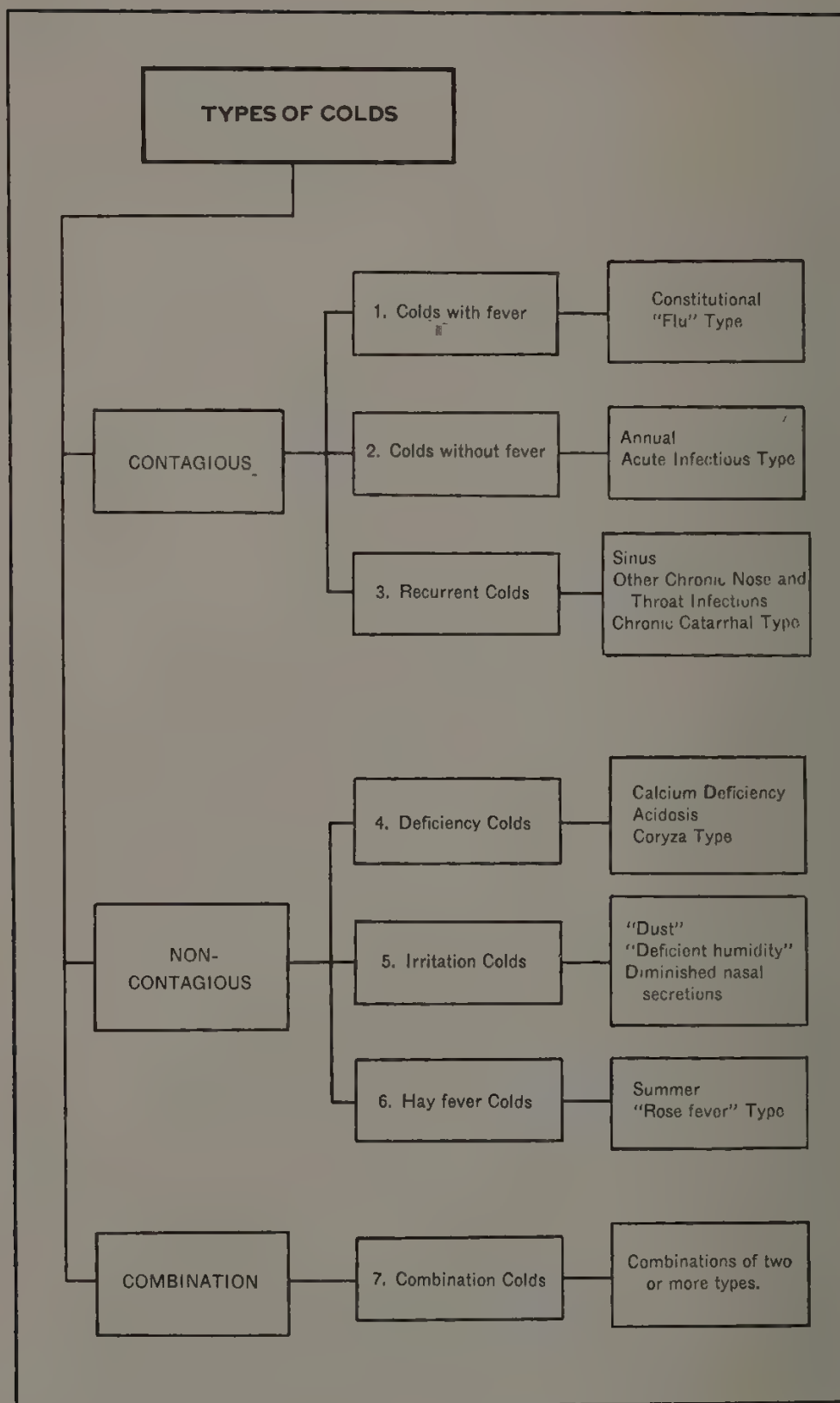


Figure 3—*Types of Colds*

which follows an attack. Many persons have colds only once a year, and are immune for a longer or shorter period of time after recovering from an attack. The fact that some individuals who have been subject to frequent colds have been benefited by vaccine treatments, further suggests the possible infectious nature or microbic origin of some types of colds.

It is highly probable that no amount of cold bathing and other commonly advised preventives will always serve to protect one from these infectious colds. They strike individuals in the neighborhood with the unconcern and impartiality shown by measles, mumps, or smallpox, when these maladies are abroad in the community. These infectious colds sometimes become epidemic, and it is quite likely that the individual's general physical state has but little to do with their contraction.

Disturbances of the circulation undoubtedly act as a contributory influence in producing the various types of infectious colds. This group can sometimes be prevented by proper adjustment of the clothing, by avoiding drafts when fatigued, by preventing chilling, exposure, cold feet, and so on. Certain individuals afflicted with an unstable circulation, having a pale skin with slow and sluggish blood movement, with habitually cold hands and feet, find themselves very easily and quickly

chilled when some portion of the body is subjected to slight drafts, or when otherwise exposed to rapidly cooling influences. Proper methods for overcoming this instability of the skin circulation will be considered later, under the head of the prevention of colds.

The cold of this type, then, may be defined as an acute, infectious disease, more or less contagious, chiefly and primarily affecting the mucous membrane of the nose and throat. Numerous conditions pertaining to the physical health of the individual, as well as the nature of his immediate surroundings, are all directly or indirectly concerned in producing a favorable soil for the growth, development, and spread of the microbes responsible for the cold.

The sneezing which usually accompanies the "catching of a cold" is a symptom of the first stage of the disease—it is positive evidence of the cold you already have. Both chilling and sneezing are indications that you already have a cold, that the infection has taken root; the germs have begun to multiply; the mischief has begun to spread.

Our reasons for regarding certain types of colds as being caused by microbes (See Figure 2) may be summarized as follows:

1. Some colds are shown to be contagious, and therefore caused by germs, by the simple fact that

they are "catching," that one can take a cold from another person who has a cold. Such colds behave like other contagious diseases.

2. Severe colds always begin with a sensation of chilliness followed by more or less fever—chills and fever. That is the identical manner in which practically every infectious disease caused by microbes begins its course.

3. Like all germ-caused diseases, certain colds have a tendency to run a more or less definite course. They are self-limited; that is, after a certain time, they usually begin to improve of themselves. In this way a cold behaves exactly as do measles, chicken pox, scarlet fever, pneumonia, and other maladies.

4. Like other infectious diseases, the contagious type of colds may be followed by inflammations in various internal organs, producing a congestion of the stomach, lungs, liver, spleen, or kidneys. These secondary results are due to the irritating effects of the poisons (toxins) of the germ circulating in the blood stream of the patient. These symptoms of secondary poisoning follow in the wake of colds and influenza just as they follow attacks of diphtheria and scarlet fever.

5. This group of colds is shown to be infectious by the fact that they are usually, sometimes highly, contagious; when one has a severe cold he can give

it to others, to those individuals who are particularly susceptible.

6. Infectious colds, like other contagious maladies, can be prevented, controlled, and regulated by isolation and quarantine; and we should hasten the time when they will be thus sensibly regarded and scientifically treated.

7. Some colds are shown to be more or less infectious by the fact that they can generally, in their earlier stages, be successfully treated and effectually aborted by the use of antiseptic nose washes and germicidal throat gargles.

8. That certain colds are of an infectious nature is further suggested by the well-known fact that a severe cold seems to confer a short-lived immunity upon its victims. That is, a healthy, robust person who is just recovering from a very bad cold is not likely to have another such attack for several months, maybe not for a full year. Some people have their regular colds once each winter; then they are seldom bothered with a cold for another year.

THE NON-CONTAGIOUS COLDS

Just as certainly as we have three groups of colds that are contagious, we have three that are non-contagious. These do not "run through" families, groups of students, and the like. They are gen-

erally confined to susceptible individuals. That these colds are not contagious is not only proved by observation, but repeated experiments in which the secretions of the noses of acutely afflicted individuals have been transplanted to those of persons who were not afflicted have failed to produce any symptoms of a cold.

While attention to general hygiene and all efforts to upbuild the health and increase the vital resistance are of some value in the treatment of this group of colds, these hygienic precautions are not nearly so valuable as they are in treating the group of contagious colds. Efforts to improve the circulation, increase the elimination, and prevent chilling through exposure, or drafts, may be of some value in the prevention of this type of cold, but the thing of greatest importance is to remove their specific causes.

In the case of many individuals over forty years of age, the mucous membrane of the nose appears to have largely lost its power of providing the germicidal secretions which were abundant in earlier years. This dry condition of the nose seems to predispose to that irritation which is capable of setting up the violent reaction we call a cold. This type of cold can be largely prevented by the practice of anointing the nostrils each evening upon retiring with a little simple ointment,

such as borated vaseline. There are many of these ointments on the market which are not irritating to the nose, and which prevent the undue drying out and formation of crusts during sleep. While I have seen people all but eradicate colds by this simple practice, I think it is not a good thing to start early in life unless absolutely necessary, for when once begun it will probably have to be kept up the rest of one's lifetime. A simple ointment for this purpose is the following:

Menthol	3 grains
Camphor	10 grains
Oil of eucalyptus	15 drops
Petrolatum (white)	1 ounce

Mix into ointment and put up in collapsible tube. Squeeze a little ointment out of the tube on to the tip of the little finger and thoroughly anoint both nostrils.

A great deal of this tendency to dryness in the nose is due to habitual lack of humidity in the air of our living and working rooms. This is one problem of modern civilization which has not been solved. Wonderful advances have been made in the past fifty years in heating problems, but the humidification proposition has not kept pace with our heating development. If we could satisfac-

torily humidify the air in our living, working, and sleeping rooms, I am satisfied that a very large percentage of the colds belonging to this group would immediately disappear, and until we can improve our humidification, about the best thing we can do is to resort, especially during the night time, to the simple ointment already suggested.

This is the type of cold that is sometimes greatly improved when an individual moves from a dry to a more humid climate.

Colds of this "irritation type" are probably also caused by numerous odors, fumes, and gases, as well as by certain articles of diet. Certain susceptible individuals can bring on a cold, a mild bronchitis, or even an asthma attack, by inhaling too much smoke or breathing the fumes of a locomotive as they are sometimes confined in train sheds or tunnels.

It is highly probable that some persons are susceptible to certain odors and peculiar forms of dust, so that they will respond to them with a form of nasal irritation which comes to resemble an acute cold; and all this is not difficult to understand when we pause to consider what a great hay-fever disturbance a little pollen can cause.

Very recently it has been discovered that the monkey tribe is subject to attacks which are in every way similar to the common colds of human

beings. It has long been known that many of the domestic animals are subject to attacks of so-called distemper, which are in many respects similar to colds. It is barely possible that these observations, together with further study of these distempers, may serve to establish the identity of human colds and these similar animal disorders, and in this way the foundation will be laid for subsequent experimental investigation and the possible development of preventive vaccines or curative serums.

We already know that certain types of colds can be produced by what scientists call a "filtrable virus." The agent causing such infections filtrates through an animal membrane in such a manner as to distinguish it from germs or living organisms which are not thus filtrable. This suggests that certain chemical substances, just what we do not know, are able to produce this type of cold.

CHAPTER II

THE PREDISPOSING CAUSES OF COMMON COLDS

CAUSES of colds may be divided into two classes: the predisposing, that is, those conditions of the body indirectly favoring colds; and the exciting, that is, the immediate or provoking influence producing the cold.

The various bodily states and physical habits which favor taking cold are quite numerous. The term "colds" is but a reminder that this infection is popularly supposed to be caused by the influence of cold air, exposure, or low temperature. In the previous chapter I tried to dispel this delusion. High temperatures, as a rule, have more to do with colds than low temperatures; in fact, it would be decidedly more proper to speak of "catching heat" than of "catching cold." The predisposing causes of colds may be enumerated as follows:

1. *Overeating and indigestion.* The practice of habitually taking into the stomach more food than is required to nourish and sustain the body results in overworking the digestive organs, clogging the system, and greatly overtaxing the organs engaged in the elimination of body poisons and

waste matters—the skin, kidneys, and others. When in such a state as this, the body is ill prepared to fight hostile microbes and resist infectious colds. The first great cause of colds is overeating combined with underworking.

I have observed many sufferers from chronic colds greatly helped or permanently cured by improving digestion and cutting down their daily ration, thus effectually preventing the intestinal fermentation and putrefaction which results in the absorption of poisons and toxins through the bowel tract into the blood stream.

The observing physician is forced to recognize that there exists more than an accidental relationship between habitual gluttony and frequently recurrent colds. The dyspeptic is doubly predisposed to take cold from the slightest exposure or from the least disturbance of the circulation.

2. *Excess of protein.* Occasionally, we find an individual who is predisposed to catarrh and colds because he is anemic and undernourished; for he either eats too little, or he does not assimilate his food, or his food is not nutritious and abundant. On the other hand, great numbers of sufferers from chronic and repeated colds are found among the high protein consumers, the heavy meat-eaters.

As a nation, we are large meat-eaters, daily consuming from two to three times the amount of

protein required to maintain the body in a state of perfect health. This fact has been shown clearly by the reliable experiments of many physiologists, of note, as well as by the observations and experiments of numerous other investigators along the lines of dietetics and nutrition.

It is not alone my own experience, but also that of many of my patients, that reduction in the protein food element has been followed speedily by a reduction in colds, both in frequency and severity. This will be considered at greater length in Chapter Four, under the head of the prevention of common colds.

3. *Dyspepsia and acidemia.* It is commonly observed that severe and acute colds frequently follow attacks of acute indigestion. Chronic dyspepsia and chronic colds go hand in hand. As has been noted, the lowered alkali reserve of the blood which accompanies indigestion and dyspepsia predisposes to all infections and various inflammations, at the same time greatly crippling the body in its efforts to fight germs and withstand infection. The liberal use of the strong condiments undoubtedly irritates the nose and throat and thus favors congestion and colds.

All victims of dyspepsia suffer more or less from poor circulation, together with disturbances of the nervous system and derangements of the heat

regulating mechanism of the body. These abnormalities in the working of important physical functions greatly predispose the dyspeptic to catching cold upon the slightest provocation.

4. *Chronic constipation.* Either alone or accompanying the foregoing conditions, constipation is certainly, in some measure, responsible for the annoying habit of catching cold so troublesome to some people. It is a common bit of history to elicit from patients who are coming down with the grippe or a severe cold, that their bowels usually move quite regularly, but that for the past week they have been somewhat constipated. Sluggishness of the bowels, in the majority of cases, precedes the taking of a cold.

Even in the case of infants and young children, a period of more or less constipation is almost certain to be followed by a bad cold. The absorption of intestinal toxins seems to be very closely related, in many individuals, to the tendency to take cold and this constitutes the great reason for the early use of cathartics when one is "coming down with a cold."

5. *Errors in clothing.* Another of the predisposing causes of colds is the wearing of too much or too heavy clothing. Many of the victims of recurring colds wear so much heavy woolen under-clothing that they continually are perspiring, and

thus they expose themselves to additional dangers of chilling and taking cold. Frequent perspiration always increases the cold hazard.

The opposite extreme—the wearing of too little clothing and the consequent exposure and chilling which inevitably follow—must result in greatly predisposing ill-nourished and otherwise susceptible persons to catching frequent and severe colds.

The habit of wearing thick furs over some portions of the body, as about the neck, should be avoided, except in the severest of cold weather. Tight collars and tight neck bands favor congestion and sore throat. So-called “chest protectors” are a snare and a delusion. These devices invariably render their wearers more liable to contract colds. Especially is it unhealthy to wear heavy woolen undergarments and street clothes when employed indoors the greater part of the day. Rubbers, mackintosh coats, oil-skins and other sweat-retaining garments all debilitate the skin and favor taking cold.

6. *Inactivity of the skin.* This is undoubtedly one of the greatest predisposing causes of colds. The physicians of the next generation will pay more attention to the hygiene of the skin than we do at present. The skin is an organ of great importance when studied from the standpoint of colds. The average individual has about seven-

teen square feet of skin, whose countless thousands of eliminating ducts represent an area of almost eleven thousand square feet, while these eliminating tubes, if placed end to end, would make a single sewer about ten miles long.

When the skin is dry, rough, leathery, cold, and bloodless, it indicates that the internal organs and mucous membranes are more or less congested, and internal congestion is just the condition that favors taking cold. This is why congestion of the lungs favors bronchitis and pneumonia.

Chilling of the skin and unbalancing of the general circulation results in producing conditions in the nose and throat in every way favorable to the growth and activity of the various germs which are ever found there, and which, when suitably aroused, are capable of rapid development and untold mischief.

7. *The sedentary life.* There can be little doubt that the indoor life predisposes to colds. Sedentary workers are subjected, as a rule, to an overheated atmosphere during the winter. They are usually compelled to breathe foul air, which irritates the nose and throat and favors infection and subsequent inflammation of the mucous membranes.

Again, lack of physical exercise results in the sluggish circulation of the blood through both muscles and skin, and this all favors the taking of

cold when persons in such circumstances are momentarily exposed to drafts or other chilling influences. Likewise, the inhalation of smoke and other irritating gases from locomotives or manufacturing plants tends to irritate the nose and throat, and this predisposes to colds.

Any person who has a normal, healthy circulation, especially one who habitually lives out of doors, can successfully withstand almost any and every degree of exposure to the various common causes of colds.

8. *Lowered vitality and fatigue.* All persons suffering from lingering and wasting diseases, together with those having lowered vitality from whatever cause, are predisposed to recurrent colds. One is also more likely to catch cold when fatigued, as in the evening after a day's hard work, or after having undergone some severe physical or taxing nervous strain.

Any scheme for preventing colds which does not aim at the development of the power of vital resistance—at increasing one's powers of reaction to infection—is doomed to certain failure. Any and all influences which in any manner lower the vital resistance greatly increase the likelihood of taking cold.

By far the majority of common colds are contracted at night, when the body is wearied and the

vital resistance is greatly lowered. Chronic sinus infection—itself often a result of lowered vitality—is also a cause of many acute colds. In fact, many persons have a smouldering cold in the form of chronic infection lingering in the nose all the time.

9. *The mental state.* There can be little question, from our knowledge of the influence of the mind on the circulation of the blood—especially the movement of the blood through the skin—that a person's mental state may often act as a predisposing cause of colds.

Victims of fear, grief, and chronic worry usually have pale skins; and in this way, by its influence upon the skin circulation, the mind itself may contribute to that disturbance of the circulation which so predisposes to the catching of colds. Night air is erroneously supposed to favor taking cold, and the fear of night air has acquired the dignity of a popular superstition. Night air is colder than day air, more chilling; and only because of this fact can night air ever be truthfully charged with causing colds. Proper and sufficient clothing will effectually rob night air of all its cold-terrors.

The despondent man or woman is undoubtedly predisposed to contract any contagion to which he or she may be exposed. The discouraged and disheartened are the first to succumb to exposure and infection. There can be little doubt that the pes-

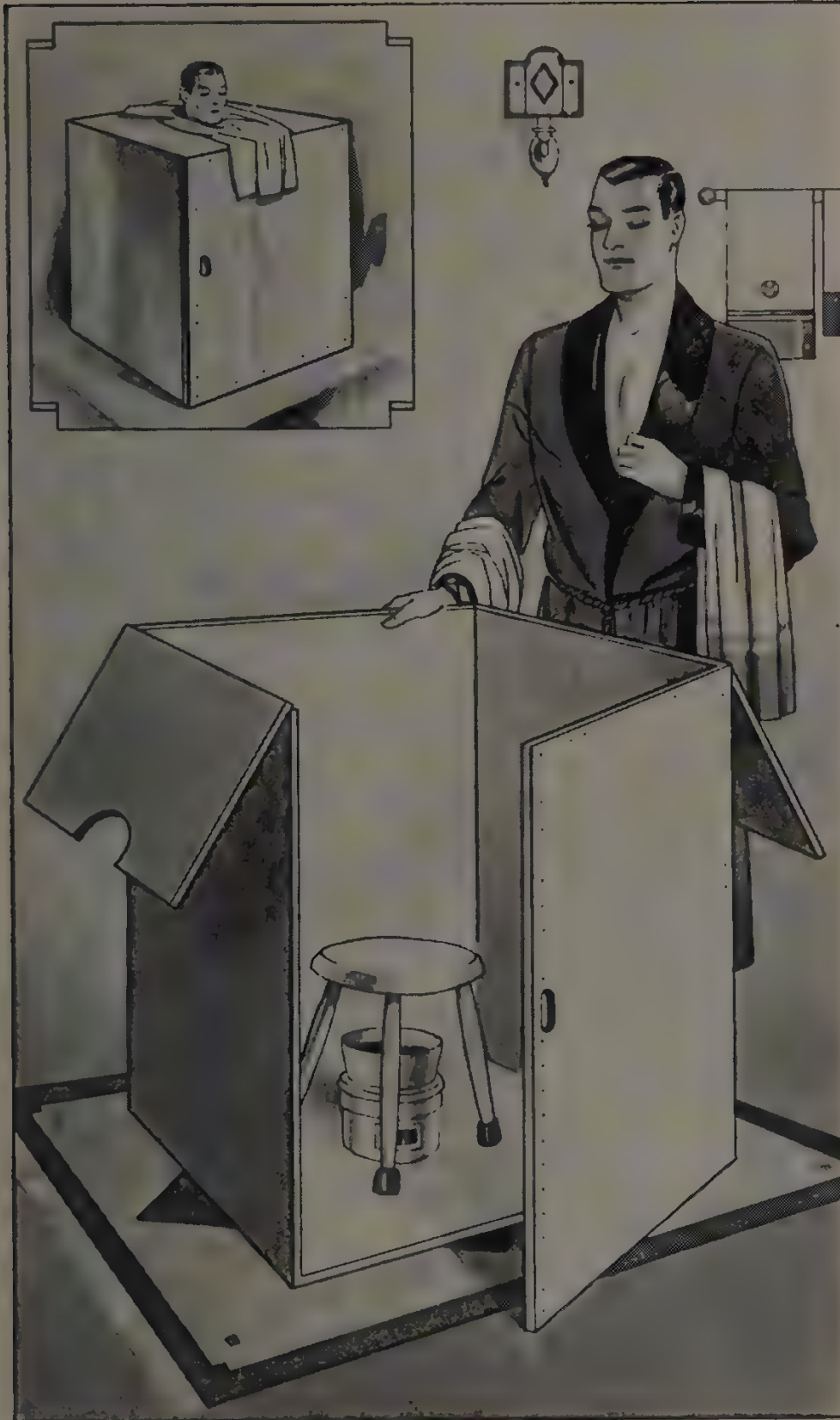


Figure 4—*Taking Sweat Baths in a Portable Cabinet*

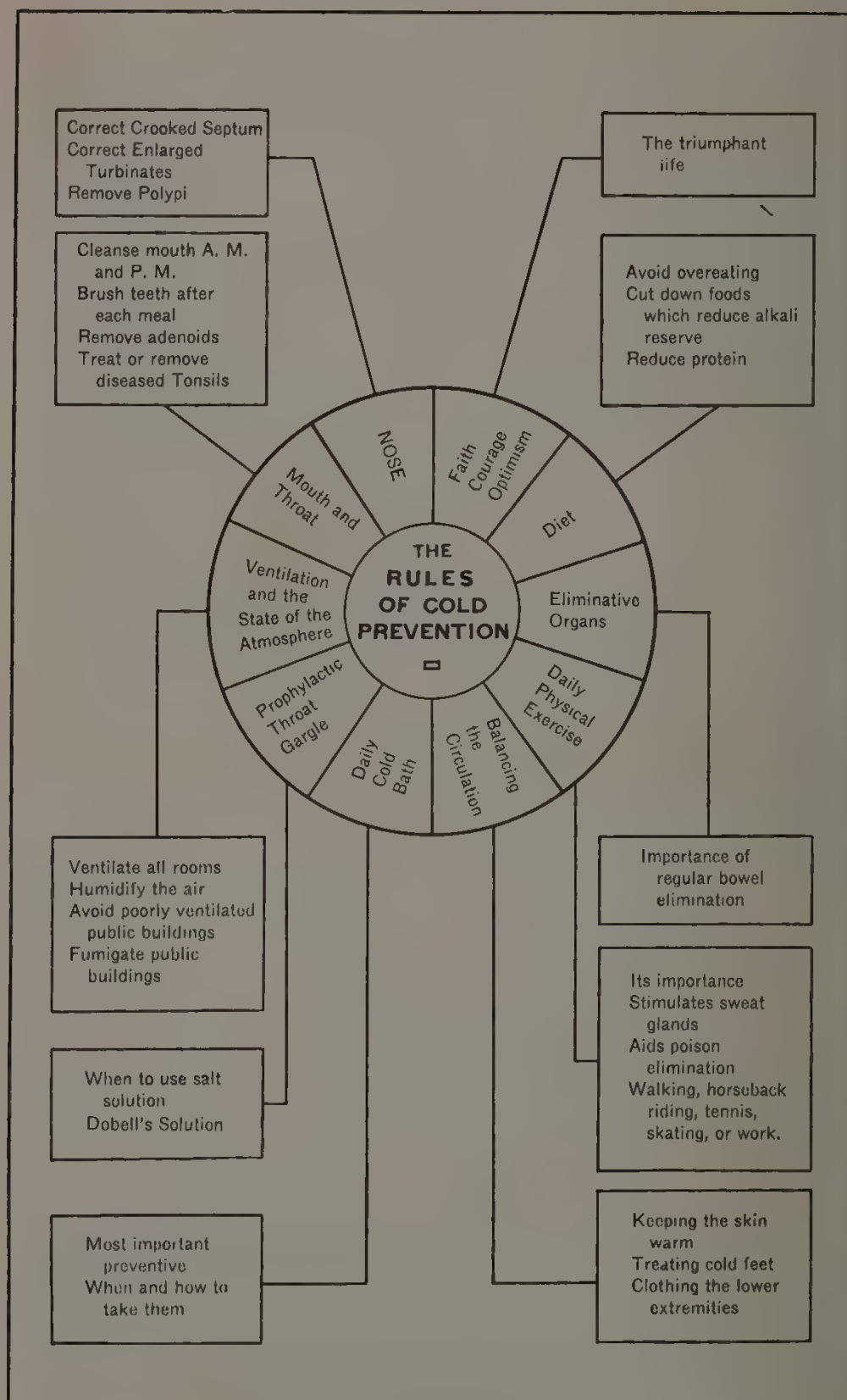


Figure 5—The Rules of Cold Prevention

simist—other things being equal—manifests a somewhat greater tendency to take cold than does our friend, the optimist.

10. *Alcoholic excesses*, tobacco smoking, and various other physical habits which may interfere with the individual's health by decreasing the vital resistance or by acidifying the blood all favor the development of that bodily state which predisposes to catching cold. Alcoholic excesses also favor pneumonia.

It is a fact not generally understood that the constant use of the various narcotics tends to decrease the alkalinity of the blood. When the alkalinity of the blood is decreased, the vital resistance is decreased, the individual's susceptibility to all acute infections—including common colds—is increased greatly. The commonly used narcotics which exert a tendency toward diminishing the alkalinity of the blood are alcohol, tobacco, tea, and coffee, as well as numerous patent medicines, headache powders, and the like.

Drugs, in fact any and all influences which tend to derange the normal chemical activities of the body, indirectly contribute to the predisposition for taking cold. Of even greater influence are all those nervous causes of functional derangement, such as fear and anxiety states, which so indirectly lead to fatigue; and fatigue, whether caused by

mental, chemical, or mechanical factors, always predisposes to taking cold.

If one will think back in his experience to the actual conditions present at the time a cold was contracted, he will be able, in the majority of instances, to recall the fact that he was either chilled or was suffering from unusual fatigue, or both of these conditions may have been present, constituting the ideal stage setting for taking cold.

In trying to find the cause of the common cold, we must not only utilize the laboratory and its microscope in an effort to discover those subtle microbes which have thus far escaped our detection, but we must pay equal attention to these problems of nervous and chemical derangements.

CHAPTER III

THE EXCITING CAUSES OF COMMON COLDS

HAVING quite fully discussed the various predisposing causes of colds, we may now briefly consider the exciting or immediate causes. They may be discussed under the following heads:

1. *Skin-chilling or drafts.* The ordinary healthy individual with a vigorous, active skin, good digestion, and nervous strength, is able indefinitely to withstand any ordinary draft. People with good blood and healthy blood vessels will not catch cold because the wind blows momentarily on the back of their necks or on any other part of their bodies.

Those who catch cold from slight drafts are in a precarious condition. Instability of the circulation and a state of lowered vital resistance make them an easy prey to any and every disease germ that may happen along. Victims of the draft bugaboo should begin at once a course of skin gymnastics, by means of exercise and baths, which will be later suggested, and as soon as possible improve their skin reaction to that point where they will be able to withstand all ordinary drafts or exposure.

Nevertheless, while we recommend these skin gymnastics for persons with poor circulation and lowered vitality, we would not advise anyone to engage in foolhardy efforts to harden himself or otherwise to expose himself unduly to chilling influences. It requires some little time to make these circulatory changes.

At present I am wearing thin cotton or linen-mesh underwear throughout the winter. Years ago I wore the heaviest woolen underwear. Several years were consumed in making this change. We have known many cases of fatal pneumonia to result from enthusiastic efforts to harden oneself quickly to the influence of cold weather.

It is time that the *draft delusion* should be driven from our midst. Healthy people have nothing to fear from drafts. Weak and debilitated individuals who suffer from them should avail themselves of such assistance as will enable them to acquire sound digestion, active bowels, and healthy skins. And just in proportion as one improves the general health and promotes the circulation of the blood, the tendency to catch cold will certainly disappear, provided there exists no local source of chronic irritation or deformities and abnormalities in the nose or throat.

2. *Damp or cold feet.* Wet feet is one of the great exciting causes of colds. Especially is this

true in the case of young women. The nerves on the soles of the feet are reflexly connected with certain internal organs, among which are the mucous membranes of the nose, throat, and lungs.

Chilling the feet results in congesting the internal organs, while keeping the feet warm and full of blood, as will be seen later, is a great aid in preventing and successfully treating colds. Of all parts of the body which should be kept warm continuously, the feet are the most important. A combination of cold and moisture is most dangerous and to be avoided.

We have not yet improved on the advice of the old French doctor who exhorted us, "Keep the feet warm, the head cool, and the bowels open."

We greatly deprecate the recent tendency to make light of *wet feet, chilling drafts* and so on, as factors in the causation of colds. Some, in their efforts to call attention to the important fact that colds are caused by germs, in their worthy enthusiasm to expose the "draft fetich," in their endeavors to lead people to quit coddling themselves, and in their laudable efforts to dispel the erroneous notions and harmful superstitions of the past, have gone too far; they have gone so far as to assert that wet feet and other exposure have nothing to do with catching cold. They teach that drafts should be utterly ignored—and so they should; but this

cannot safely be done before the body is prepared for the change. A change in circulation is necessary before the pale-skinned and chilly victims of the "draft bugaboo" can defy successfully its dangers and delusions.

In the good work of proclaiming the more recently discovered microbic cause of colds, it is entirely unnecessary to ridicule or ignore the well-known fact that wet feet, exposure, and so on, do act as predisposing causes and contributing factors in producing colds. The microbe is indeed the seed of the infection; but it requires soil as well as seed to produce a cold, and these various disturbances of circulation and metabolism are just the influences which work together for the production of suitable and favorable soil on which the ever-present microbe begins its growth and its preparation for subsequent attacks upon the human body.

3. *Superheated atmosphere.* As a rule, it is not quickly going out into the cold air that causes one to take cold; it is rather the overheated indoor atmosphere with its poisonous gases which has so weakened both the skin and the air passages that they are unable to produce a healthy reaction when suddenly exposed to cold—as in going from an overheated room immediately out of doors.

The temperature of living-rooms during the winter should range from 65 to 68 degrees F. If

some of the members of the family are chilly at this temperature, let them put on wraps for a few days until they become used to it. Overheating is a serious cold menace.

Recent experimental observations made in France prove that the temperature of living-rooms is directly concerned with the question of atmospheric purity. Certain poisonous gases found in expired air are probably condensed and fall to the floor when the temperature is below 65 to 68 degrees F., while a higher temperature permits these subtle gases to remain in their vapory state, in which condition they are able to enter the lungs; and so they add greatly to the poisonous and deleterious influence of the atmosphere of all living apartments which are not perfectly and ideally heated and ventilated.

This newly discovered fact concerning the behavior of the poisonous gases of animal respiration goes a long way toward explaining the seemingly paradoxical fact that the Esquimaux can seal themselves up in their apparently air-tight ice houses for comparatively long periods without experiencing the least discoverable ill effects from having to breathe and rebreathe the same old air. The temperature in these igloos is so low that the watery vapors containing the greater part of the poisonous gases of respiration are immediately

condensed, and their poisons are thus precipitated to the floor—safely below the breathing level.

To live in such an air-tight apartment in a tropical clime, or even with the temperature above 70 degrees F., would soon prove fatal.

Again, when the room temperature is raised much above 70 degrees, an imperceptible perspiration appears on the skin, the evaporation of which has a tendency to chill the body. This chilly sensation persists until the temperature of the room reaches the neighborhood of 80 degrees; but if the temperature be maintained uniformly below 70 degrees, this perspiration is prevented and the consequent chilly sensations are entirely avoided.

4. *Unventilated sleeping chambers.* We are constantly meeting cases of recurrent colds and chronic infection which must in some measure be chargeable to the polluted air of the sleeping room. One should accustom himself to having all the bedroom windows wide open summer and winter. There is no reason for closing the bedroom windows of healthy persons, except in very stormy or blustery weather; certainly not to exclude the cold air. Thousands of people who are suffering from a succession of colds throughout the winter would be largely relieved of this unfortunate state of affairs by throwing wide open the windows of the sleeping room. Air poisoned by tobacco smoke

and other noxious and irritating gases directly predisposes to colds and sore throats.

5. *Improper clothing.* The constant presence of a cold in the head is often due to the atrocious manner in which some people dress during the winter. It is little wonder that they contract frequent colds. Women attend fashionable functions at night with the entire upper extremities scantily clad. Little girls run about on cold autumn days with low socks and bare legs. Young women go outdoors with the lower extremities underclad. Heavy undergarments, as well as outer garments, are overlapped about the abdomen, where they are not only little needed, but, in fact, where they may do positive harm, while the extremities, arms, ankles, and legs, are underclothed and exposed to the chilling, wintry blasts. Clothing should be equalized, and all parts of the body kept moderately warm. The union suit is to be preferred over the old-fashioned shirt and drawers. All kinds of waterproof clothing are unhealthful. They prevent normal heat elimination.

The wearing of heavy woollen undergarments, especially by sedentary people and those who work indoors, is sure to predispose to catching cold; for such practices debilitate the skin and greatly decrease its powers of reaction to drafts and other sudden changes in the state of the atmosphere,

especially in its temperature. Weakening the skin is sure to cause colds.

It is equally important to emphasize the fact that colds are favored by all attempts on the part of thin, emaciated, and chilly people to go to the other extreme in their too hasty efforts to harden themselves. Colds and pneumonia may result from wearing too little clothing as well as from wearing too much. In all these matters, let us use exalted common sense!

6. *The influenza bacillus and other germs.* After all that may be said respecting the predisposing and exciting causes of colds, it must be recognized that *microbes are usually the real exciting cause.* (See Figure 2.) There are several tribes of germs concerned in the work of producing colds. The germ most to be dreaded, of course, is the influenza bacillus, which sometimes sweeps over the land as an epidemic wave. This germ not only produces local inflammation in the head or lungs, but floods the body with poisons which profoundly affect the heart and the nervous system.

The lumbermen who work out of doors in the northern woods are seldom bothered with our common colds unless some visitor with a cold chances to stray into the camp. Some colds of the influenzoid type are so virulent that they attack the average man on sight; they do not wait for the produc-

tion of a favorable soil as a result of exposure. On the other hand, these outdoor laborers of the northern forests not infrequently subject themselves to extraordinary and unusual exposure, but never suffer in the slightest degree from colds. Such exposure would be promptly followed by a bad cold in the head if the cold-germ were present. Thus our study of colds goes more and more to show that two factors are concerned in the production of all infectious colds: the *seeds*, or the microbes; and the *soil*, or the state of the health resulting from the predisposing influences to which the individual has been subjected.

Handkerchiefs which have been used by persons suffering from colds and influenza are especially dangerous and should not carelessly be thrown about the house. The practice of using a badly soiled handkerchief in public and freely flaunting it about in crowded movies and well-filled theaters is highly reprehensible.

And so, while we recognize certain microbes as the real exciting cause of practically all our colds, we must not overlook the fact that a group of predisposing and exciting causes almost invariably operate together to produce a favorable soil upon which these microbes may flourish. Certain abnormalities or diseased states of the nose and throat may furnish these microbes with favorable soil.

While we must regard certain germs as the seeds of colds, we are compelled to look upon the various causes already enumerated as constituting the soil. As in the case of all germ diseases, it is necessary not only that the seed should be present, but also that there be a favorable soil. And this explains exactly why the same germs produce colds or influenza in one individual and not in another. In one case the soil is favorable; in the other it is unfavorable. One individual is promptly smitten; the other wholly escapes.

CHAPTER IV

THE PREVENTION OF COLDS

PERSONS of sound constitution—those who are really well—seldom take cold unless they expose themselves in an unusual manner or fall victims to certain epidemic infections, such as those of the so-called influenzoid colds. In this connection it is well to remind the reader that but few people among the civilized races enjoy perfect physical health; therefore all of us are more or less subject, from time to time, to colds of varying degrees of severity.

The great difficulty about teaching people how to avoid colds is the fact that the very things which really prevent colds are popularly supposed to cause colds: fresh air, cold air, cold baths, and outdoor exercise—the best known means of preventing colds—are all generally regarded as being the cause of colds.

In the preceding chapters we considered the causes of colds, both remote and immediate. It will now be in order to discuss the *prevention of colds*. “An ounce of prevention is worth a pound of cure,” is not meaningless when applied to colds.

1. *The care of the nose.* Thousands of people are victims of chronic or recurring colds because the nose is diseased. It may have a crooked septum, so that one nostril is almost obliterated. The turbinate bones may be enlarged, or polypi may be growing in the nostrils. Individuals suffering from any one or a number of these abnormal conditions are doomed to have frequent colds, if they are not already victims of an annoying chronic sinus infection. (See Figure 1.)

There is little hope of securing relief from recurrent colds by practicing the constitutional regime later suggested when the nose and throat are more or less diseased. Competent physicians should be consulted and these conditions remedied as a first and necessary step in the battle for the prevention of colds.

Colds commonly begin in the nose. In the case of mouth-breathers, or those who suffer from a more or less chronic tonsillitis, colds frequently begin in the throat. Any abnormal or diseased conditions in the nose, especially in the case of young people and certain weakly and debilitated persons, are sure to prove a constant source of colds in the head or sore throat.

2. *The mouth and throat.* All persons with a weakened constitution, all who are predisposed to catching cold, should exercise special care to keep

the mouth clean and free from bacteria. Such persons should faithfully use an antiseptic mouth wash morning and evening. Cinnamon water, such as any druggist will be able to supply, will serve as a satisfactory and an efficient mouth wash. The teeth should also be regularly cleansed by brushing thoroughly after each meal.

Many are troubled with chronic colds and catarrh because they have *adenoids* growing in the roof of the throat. This is particularly true of children. These soft and abnormal growths are constantly dropping their secretions down into the throat, producing almost incessant hawking and spitting on the part of their victims. Adenoids, whether found in children or adults, must be removed before we can hope to overcome the tendency to sore throat and frequent colds. Many cases of so-called catarrh are due wholly to the presence of adenoids—but more about these troublesome growths later. (See Figure 1.)

The throat must next receive attention. If there is chronic pharyngitis (sore throat), it should be treated before the approach of cold weather. If the tonsils are diseased, they should be treated and, if possible, restored to a healthy state. If the patient has suffered from repeated and severe attacks of tonsillitis, if the tonsils are so diseased that they are useless to the body, they should be prompt-

ly removed. Such incurable tonsils serve as a cause of constant colds, sore throat, and tonsillitis; and they no doubt also serve as an avenue of entrance to the body for certain infectious microbes which are probably concerned in the production of rheumatism. It is a fact now generally accepted by the medical profession that certain forms of rheumatism may be derived from diseased tonsils. Merely clipping off a portion of the tonsil in such cases will not suffice. The whole tonsil should be removed. When the nose and throat have been brought to a normal and healthy condition, the patient has taken the first step in the successful warfare against chronic colds.

3. *Ventilation and the state of the atmosphere.* If you would avoid colds, breathe fresh air; ventilate working rooms, living rooms, and sleeping rooms. Dryness of the air tempts to overheating of the living rooms, for dry air increases the evaporation of perspiration from the skin, thereby increasing the sensation of chilliness. Dry air at 75 degrees will feel about as chilly as moist air at 65 degrees. Stoves, radiator coils, and hot-air furnaces should always have open vessels of water exposed to evaporation for the purpose of properly moistening the air. This moistening of the air will prove a saving in both coal bills and doctors' bills, besides making the rooms more comfortable.

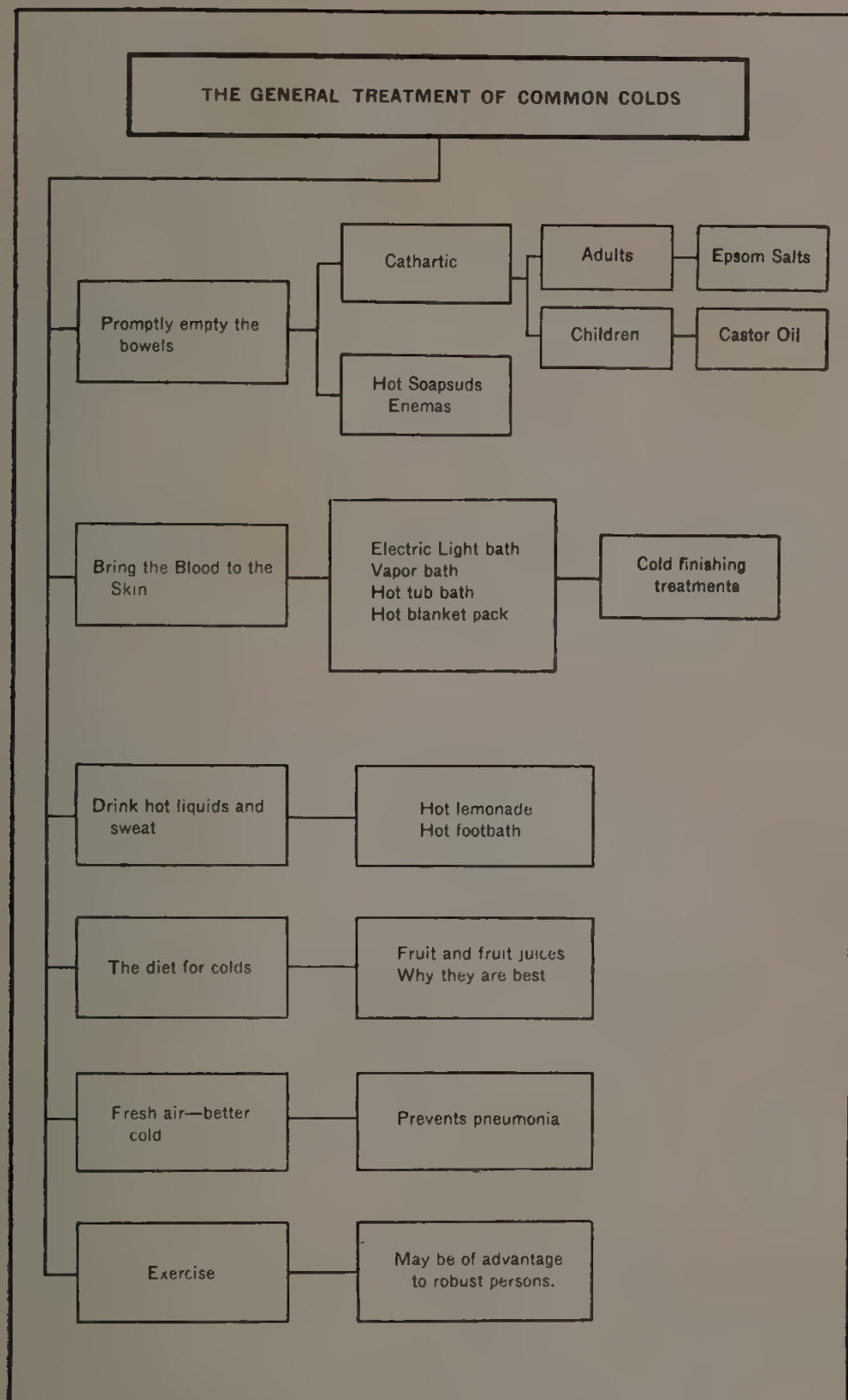


Figure 6—*The General Treatment of Colds*

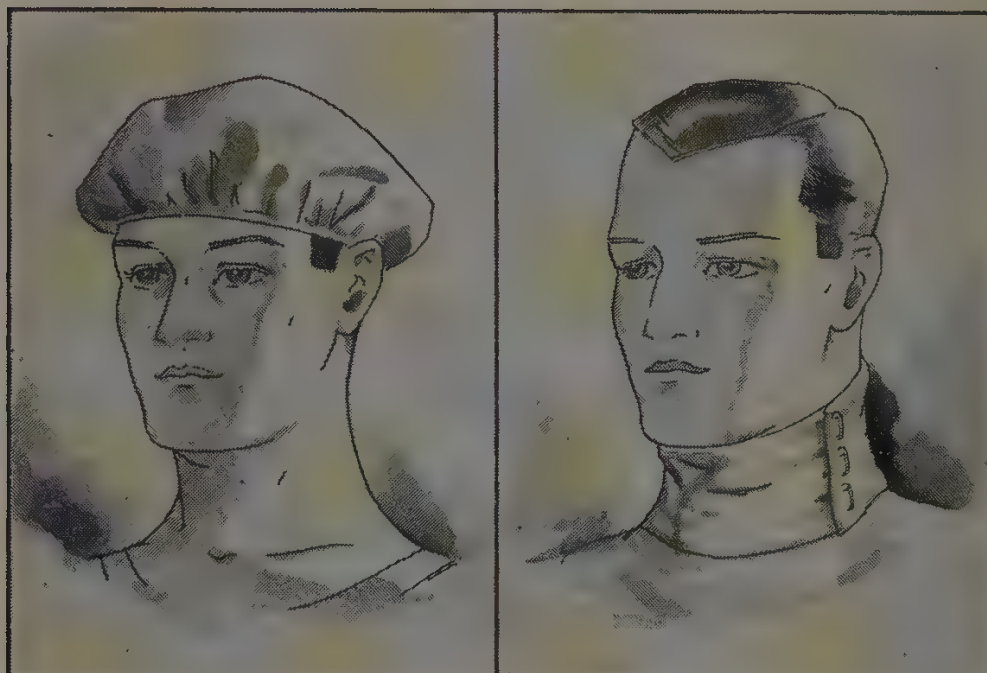


Figure 7—*The Heating
Compress Cup*

Figure 8—*The Throat
Compress*

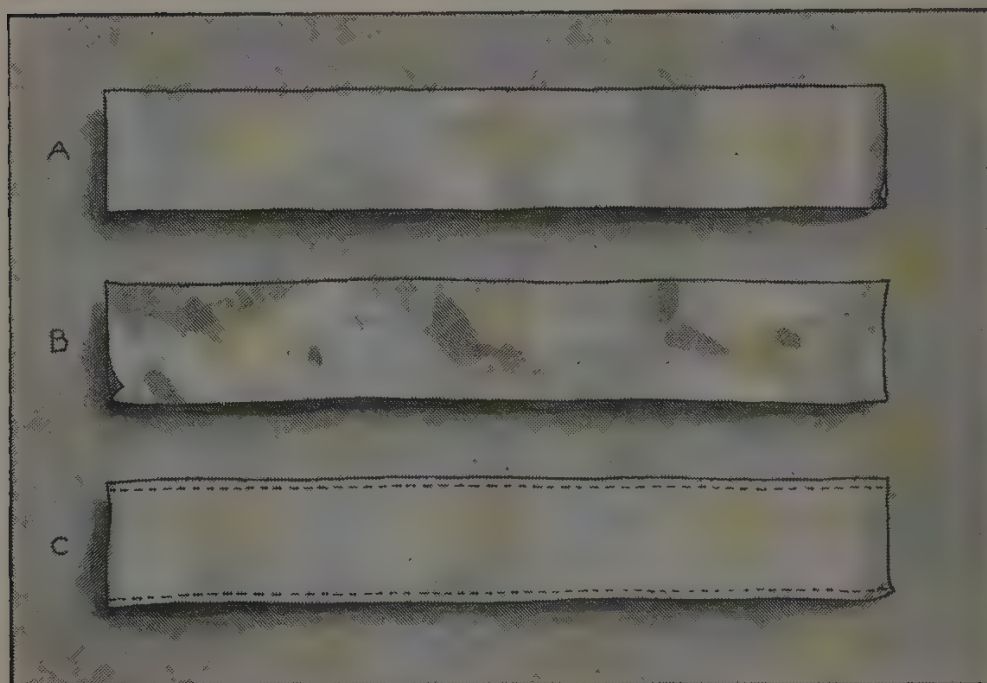


Figure 9—*The Parts of the Throat Compress*

In the effort to prevent colds, carefully avoid public buildings, theaters, and churches which are not properly ventilated. The "air of aristocracy" in the palace and the "odor of sanctity" in the church are both due to polluted atmosphere—lack of adequate ventilation; and they testify to the likely presence of a crop of cold and other germs.

All churches, theaters, and schools ought to be regularly aired out. No public assembly room should be used week after week without this airing.

4. *The prophylactic throat gargle.* Dryness of the nose or throat often constitutes the first warning of an approaching cold. The secretions of the nose and throat are naturally germicidal and tend to destroy and wash out all mischievous germs and their toxins. But when, from any cause, the natural secretions of nose and throat are altered or suppressed, the various germs capable of setting up irritation, which constantly find access to nose and throat through the air we breathe, are able to find lodgment on the dry mucous membranes and begin their pernicious activities. A dry nose is always dangerous.

At the very first notice of dryness in nose or throat, the patient may gently snuff up the nose some warm antiseptic solution and freely gargle with the same. In many cases a warm salt solution will be sufficient to relieve the dryness and abort

the infection. Lukewarm water containing a teaspoonful of salt to the pint will serve very well. Another good solution for this purpose, recognized by the U. S. Pharmacopeia, is Dobell's Solution, which can be supplied by any druggist.

DOBELL'S SOLUTION

Sodium borate	1 dram
Sodium bicarbonate	1 dram
Phenol (carbolic acid)	30 grains
Glycerine	1 ounce
Distilled water	2 pints

Mix and label: Use as mouth wash, nasal douche, and throat gargle.

5. *The daily cold bath.* Of all practices calculated to prevent colds, daily cold bathing is undoubtedly the best. Subjecting the skin to repeated applications of cold water constitutes a course of *vascular gymnastics* and greatly promotes the circulation of the blood through the skin. By this means the skin is prepared to withstand sudden drafts and other chilling influences resulting from unavoidable exposure to cold.

It is best to take these cold baths immediately upon rising, by means of the wet hand or a wet towel. While it is more healthful to sleep in a cold bedroom, it is desirable that these cold baths

should be taken in a warm room. The ideal plan would be to sleep in a cold, well-ventilated bedroom, to have the bathroom warm, and immediately on arising to repair to the warm bathroom for the cold bath.

Vigorous persons, especially those who are accustomed to cold baths, will enjoy and be greatly benefited by a plunge in the bathtub filled with cold water; and for those who desire to carry this skin training to its full limit, we would recommend *salt glows*. This procedure consists in taking about a pint of coarse barrel salt, moistening it with cold water, and thoroughly rubbing this wet salt on the skin until a red glow is obtained, after which the patient may take a cold pour, plunge bath, or shower. These salt rubs are the most powerful means of exciting the skin circulation which can be used.

There is a certain class of people who take cold baths in the morning and enjoy them, but who have headaches in the afternoon as a result, or else they feel sleepy and experience chilly sensations playing up and down the spine. Those who are thus affected by the cold bath are usually more or less emaciated, nervous, dyspeptic, constipated, etc. They need the reaction resulting from a cold bath, but they are unable to supply the necessary nervous energy and animal heat to produce this reaction.

Such persons should not abandon the cold bath as a part of their war against recurrent colds, but should precede it with a short hot bath. Take a very hot bath for two or three minutes, following this with a cold plunge, shower, pour, or sponge bath. This preliminary hot bath will greatly increase the power for good of any succeeding cold bath, and in nearly every case will do away with all the unpleasant results following the cold bath when it is taken alone. Physical exercise, such as a brisk walk in the open air, also greatly aids in producing a normal and beneficial reaction following cold baths.

6. *Balancing the circulation.* All victims of chronic colds should see to it that the skin is kept warm both day and night. The ankles and feet should be properly clothed. Under no circumstances should the extremities be allowed to go cold. Until the circulation can be improved, cold feet should be treated by means of the alternating hot and cold foot bath. Get two basins of water, one as hot as can be borne by the feet, the other as cold as you can get. Put the feet first in the hot water, then in the cold, leaving them about two minutes in the hot and about thirty seconds in the cold. Make the change fifteen or twenty times and then, after leaving them for one or two minutes in the cold water, thoroughly rub and dry them. By

persistent use of these alternate hot and cold foot baths, many cases of habitually cold feet can be permanently cured.

The ideal circulatory state is promoted by keeping the head cool and the feet warm. The lower extremities should be properly clothed. Many young women are suffering from chronic colds because of the unhealthful manner in which the lower extremities are clothed. Equalization of the general circulation is an important item in the battle against common colds.

7. *Daily physical exercise.* Daily exercise in the open air is a part of the price which must be paid for a constitution strong enough to exist above the *chronic cold line*. Nothing else will take the place of exercise in the fight against colds. Muscular exercise not only improves the circulation, but it also aids the digestion. Just as the sedentary life must be reckoned as one of the causes of colds, physical exercise, sunshine, and pure air play an important role in their prevention and treatment. Physical exercise promotes the activity of the sweat glands and very generally aids the process of eliminating numerous poisons by thus encouraging the natural functions of the skin.

No exercise is superior to brisk walking in the open air, with the head erect, chest forward, abdomen tense, arms swinging—in fact, every

muscle in the whole body thoroughly energized. All forms of outdoor exercise will be found beneficial, whether it be horseback riding, useful employment, tennis, or skating, provided such exercises are not carried to injurious extremes.

8. *The eliminative organs.* We used to think that chronic constipation had something to do with colds—and it probably does in some persons. When we suffer from a cold the bowels are usually inactive, but I have come to regard this more as a result than as a cause of the cold. We recognize the importance of combating constipation as a part of the treatment of all colds, but seriously doubt that sluggish bowels have very much to do with producing common colds.

If delayed bowel action is responsible for colds, it is rare, and must occur in those exceptional cases where there is actually an absorption of irritant poisons from the intestinal tract into the blood stream so that their circulation through the body so irritates the small blood vessels as to cause them spasmodically to contract, driving the blood from the surface of the body into the internal organs, thus causing the skin to be especially subject to the action of drafts and other chilling influences.

The victims of chronic colds, in the vast majority of cases, are found to be afflicted with *pale skin*. They are usually anemic in appearance. Their

pale skins and their colds are due to one and the same cause: that is, nervous irritability or possibly, in some cases, the toxins already alluded to.

In the effort to prevent colds, it will certainly do no harm to establish regular bowel elimination, and this should be accomplished without the use of drugs. The liberal and persistent use of fresh fruits and certain of the dried fruits, such as figs and prunes, together with green vegetables, will usually be found effective in overcoming ordinary cases of constipation. Bran and mineral oil will be found helpful in many cases.

9. *The question of diet.* I believe that diet is concerned in the prevention of colds in three ways. In the first place, overeating is a predisposing cause of colds in many heavy eaters. Secondly, the excessive use of starch and other foods which serve to reduce the alkali reserve of the body is a contributing factor. I have seen many persons greatly reduce the frequency and severity of their colds by reducing the starch and other acid-ash forming foods. Again, I have observed other patients who have greatly reduced the number of colds by a reduction in the protein element of the diet. The most common forms in which we take our protein are meat, eggs, cheese, legumes, and the nuts.

In this connection it may be well to remind the reader that when protein is eaten in excess, the

unused portion cannot be stored in the body, nor can it be promptly and harmlessly eliminated, as in the case of an excess of starch, sugar, and fat. The end products of the digestion and splitting up of protein are acid in nature, and it seems highly probable that they are indirectly concerned in producing a bodily state which greatly favors the taking of some forms of colds.

Conditions of the blood bordering on acidemia, that is, the presence of certain acid-like products of digestion and metabolism in the blood, seem to predispose many individuals to taking cold; at least there are vast numbers of people who are not able to rise above the zone of chronic colds until their systems are rid of these irritating substances.

It should be remembered that while deficient elimination of the natural wastes of the body tends to increase these acid poisons in the circulation, the larger portion of such irritating substances is derived from the excess of protein and starches taken into the body with the daily food. It would, therefore, be advisable for sufferers from chronic colds to eat less meat and cereals, and take more of the fresh fruits and vegetables. Tea and coffee also might profitably be restricted.

Certain strong individuals with vigorous circulation are able to ignore with impunity practically all these suggestions, and yet live comparatively

free from colds. They can do this for the same reason that others can drink immoderately, smoke, or indulge in other violations of natural laws, suffering no apparent serious consequences. But we are interested in helping that vast army of men and women who are trying to live above these health-destroying habits, who are struggling to gain the highlands of health, and who are fighting to escape from the bondage of chronic disease. In their battle for health they need every possible assistance to enable them to maintain a mental and physical attitude that will place them on vantage ground in their incessant struggle with the germs of colds and other infections.

10. *Faith, courage, and optimism.* The mental attitude, because of its influence on digestion and the circulation, is greatly concerned in the cause and prevention of colds. Men of courage and women of faith are not, other things being equal, so predisposed to colds and other infectious ailments as are downcast and despondent victims of fear and grief. Optimism is of real value in the battle against chronic colds.

The successful man, the one who lives the triumphant life, the man of victory, as a rule is comparatively free from colds and numerous other little annoyances which so frequently attack the downhearted and downcast. Nevertheless, when all is

said and done, that person is a rare curiosity who can for many years escape falling a victim to some cold of more or less severity. But it does lie within our power to prevent, very largely, the constantly recurring colds which so surely undermine our vitality, destroy our happiness, and in general make our lives miserable and unprofitable. Having done your full duty to prevent colds, exercise faith, be optimistic, hope for the best, and success will certainly be yours.

The annual type of colds. It is true that every now and then some member of a large family will fail to take the autumnal or winter cold. I recently saw a case where one of the children in a family of nine came home from school with a cold. In a few days all were infected except one boy, twelve years of age. He often escapes a cold that otherwise "goes through the family." It is very difficult to account for this peculiar immunity to colds, but we see it every now and then.

In recent years I have had a very peculiar experience myself. I was not particularly bothered with colds until after I had the "flu" severely when a young man. Following that attack, I always had at least one cold a year. Nothing I could do seemed to prevent these annual colds. I remember trying morning cold baths, careful dieting, exercise, and eight or ten years ago I took a

course of "cold vaccines" for two or three years. I thought they really helped some, but still I would have my cold, usually in the month of October, a short time after the windows were shut down and the fires lighted. Well, now, for some unknown reason, it is about seven years since I had my last cold, unless I fall victim to one before this book gets into print, which is just as likely as not to happen. Nevertheless, without knowing the reason therefor, I have gone for seven or eight years without a cold. Twice during this period I have had an attack of hoarseness, but without any other symptoms of a cold. I really am living no differently now than previously, and during this time have given little attention to preventing colds. I simply do not know how to explain it, but I hope it keeps up, as my colds in the old days used to last a week or ten days, and I was anything but happy with them.

I recite this experience to explain that after all we know very little about either the cause or the cure of this particular annual type of cold. Some day we hope to know more about colds, and then, perhaps, I shall understand why I suddenly became immune. I am unable to explain the experience, and if I start having colds again I shall probably be equally unable to set forth the reason for their recurrence.

Some doctors think that the ordinary stock "cold vaccines," if given in large amounts at the onset of a cold, are beneficial. I have seen some apparently good results from this procedure. I do not know whether the vaccines are specific, or whether the benefit comes from stirring up the body in a reaction against a foreign protein. I have recently made some experiments with a foreign protein which is a sterilized portion of cow's milk, and it seems to me that this has about as desirable an effect in lessening the severity of a cold as our bacterial vaccines. It may be that we shall find some day that any foreign protein injected at such a time is beneficial, but one thing must be remembered: it has to be given very promptly—at the very onset of a cold—to have any immediate effect on these attacks.

Some day we undoubtedly shall have one or more specific vaccines or serums for colds, at least for those types which are caused by the various groups of microbes.

CHAPTER V

THE GENERAL TREATMENT OF COLDS

IN considering the treatment of common colds, it will probably be best first to take up certain general procedures which are appropriate for all classes and stages of this annoying complaint. There is no sure cure or royal remedy for colds. After these general considerations, we will take up the treatment of a cold in its three different stages. No greater mistake can be made than to treat colds with the conventional indifference. The physician of today does not advise his patients as did a certain old-time practitioner who, when asked how he would treat a cold, replied, "With contempt, madam, with contempt." All ordinary colds should be managed after the following general plan.

1. *Promptly empty the bowels.* From the previous discussions respecting the cause and prevention of colds, it must be evident that constipation and overloading of the bowels is associated frequently with colds and other acute diseases. The task of clearing out the intestinal tract consists of two distinct procedures.

At once take an active cathartic, such as a large dose of epsom salts (one or two tablespoonfuls, according to the individual susceptibility), or, in the case of children, give two doses of castor oil about one hour apart. But even the action of a vigorous cathartic should not be depended upon entirely; in addition, the colon or lower bowel should be thoroughly washed out with warm soap-suds enemas. Castile soap or even common toilet soap will suffice for this purpose. These enemas may be given at a temperature varying from 100 to 104 degrees F. Each enema should consist of one to two quarts of water. The fountain syringe containing the water may be hung four or five feet above the floor—not higher than the top hinge of an ordinary door. After about a pint of water has entered the bowel, a crampy sensation is usually experienced. If the rubber tube supplying the water be compressed for a few moments, these cramps will disappear, and the entire bagful of water can easily be taken.

The important thing about cleansing the bowel when one is coming down with a cold is to wash it out thoroughly, repeating these large, warm, soap-suds enemas two or three times or even more if necessary, until the water of the last enema returns from the bowel comparatively clear and free from fecal matter. Enemas are valuable separate and

apart from the taking of cathartics. A partial enema is of little real value.

In order to dissolve and properly remove matter from the intestinal tract, hot water is required, but it should be remembered that this hot water always weakens the intestines and predisposes to constipation. This is why people who regularly depend upon the enema to empty the bowel soon acquire the *enema habit*. How can this be avoided? Very easily: by simply allowing a pint or a pint and a half of cool water (75 to 85 degrees F.) to enter the bowel after the last warm enema. If no inconvenience is experienced, the cool enema may be retained in the bowel. This cool enema will tone up the bowel and almost entirely counteract the debilitating effects of the preceding hot injections. In case of an irritable bowel, it is sometimes wise to add a teaspoonful of salt or common baking soda to this concluding cool enema.

2. *Bring the blood to the skin.* The blood vessels of the skin are able to hold from one-third to one-half of all the blood in the body. In the first stage of a cold, the skin is usually pale, rough, and cold. The hands and feet are usually cold. Chilly sensations play up and down the spine. The next important step in the general management of all colds is to induce the blood to return to the skin. The patient must be kept warm, but this

should not be done at the expense of fresh air, or by overheating the atmosphere of the room. It should be done by putting on extra clothing, or by going to bed with a hot water bottle after the bowels have been thoroughly cleansed.

For the purpose of heating the skin, a vapor bath may be taken, such as can be had in an ordinary portable bath cabinet with an alcohol lamp. (See Figure 4.) The ideal private bathroom of the future will probably contain an electric-light bath cabinet, as the electric-light bath is undoubtedly the ideal sweating procedure in breaking up colds.

But in the absence of any or all of these appliances, an ordinary hot tub bath may be taken, with cold cloths on the head; or the patient may be wrapped up in a blanket wrung out of boiling water with two or three dry blankets wrapped about the outside, all these surrounded by hot water bottles or glass jars filled with hot water. This *hot-blanket pack* makes almost an ideal sweating procedure, after which the patient should be thoroughly rubbed with cold water or ice water and sent to bed. In giving this cold water rub, only a small portion of the body should be exposed at a time. *Don't forget that this cold ending is an essential feature of all these hot sweating baths.*

3. *Drink hot liquids, and sweat.* When taking a cold, drink an abundance of hot water or hot



Figure 10—*The Hot-Blanket Pack*

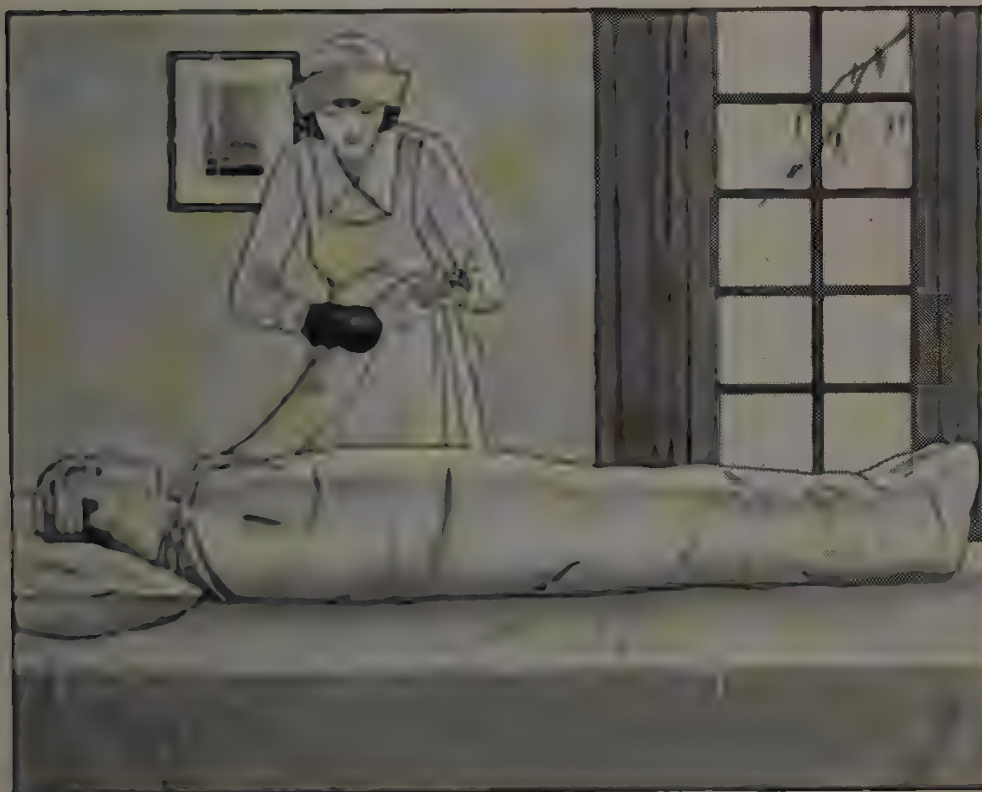


Figure 11—*The Cold-Mitten Friction*

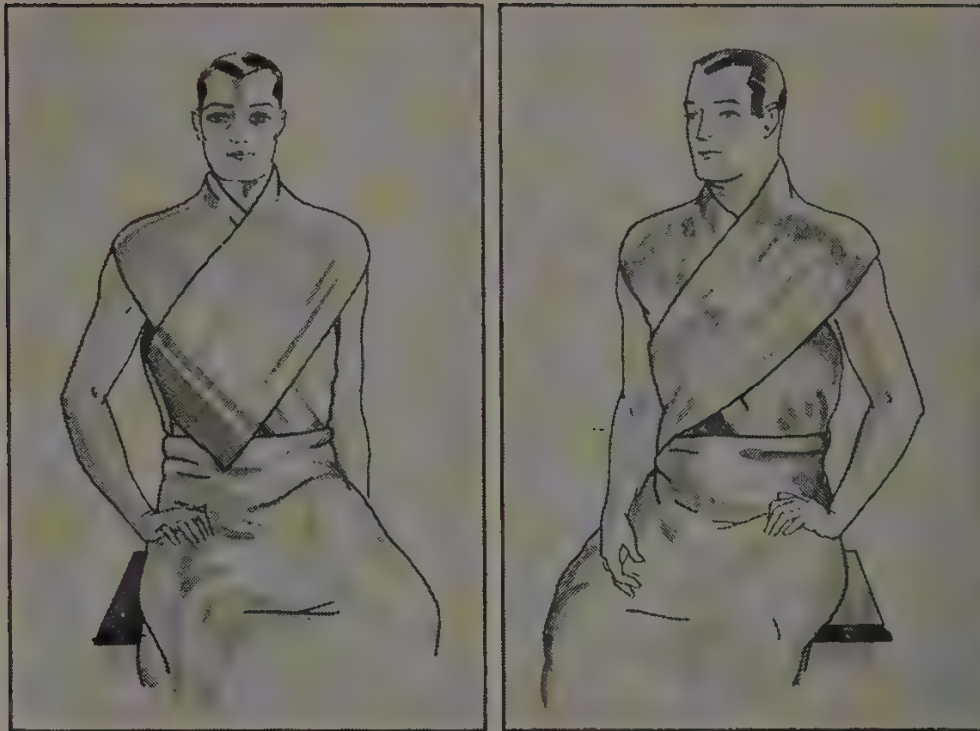
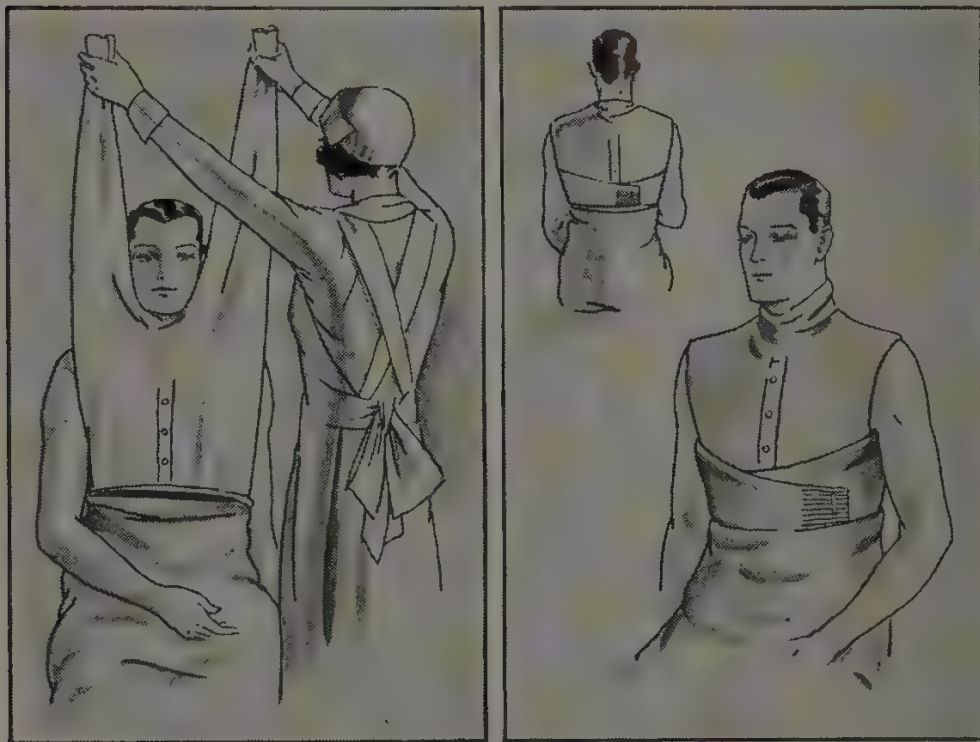


Figure 12 (above, left) shows the towels in place
 Figure 13 (above, right) shows the waterproof covering
 Figure 14 (below, left) and Figure 15 (below, right) illustrate
 the method of covering and the completed pack



Figures 12, 13, 14, 15—Method of Applying Chest Pack

lemonade. Put the feet in very hot water, and sweat; or if some sweating bath is given, drink hot lemonade in connection with the bath. If there is headache, apply cold compresses over the head, and, if necessary, around the neck.

In case of all colds, cut down the solid foods and increase the liquids. The patient, as a rule, will not relish much water, but will readily take vast quantities of hot or cold lemonade.

In giving any form of sweating bath, care should be exercised to see that the bowels are thoroughly cleaned out before an effort is made to sweat the patient. Plenty of drinking water should also be supplied before and during the sweat. Don't forget to keep the patient's head properly protected by generous cheesecloth compresses or by a linen towel wrung out of ice water. It is a good plan not only to place this cooling compress over the forehead and on top of the head, but also to see that it is wrapped around the neck.

In giving the finishing cold treatment which must invariably follow all sweat baths designed to break up a cold, the patient may be briskly rubbed with cold water—ice water is better—by means of the bare hand. A still better method of giving this cold terminal treatment is by means of a friction mitt, such as can be made out of rough mohair cloth or from Turkish toweling. In this way the

beneficial effects of friction are added to the good effects of the cold water, both tending to produce a vigorous skin reaction: that is, both tending to bring a large volume of blood quickly to the skin, thus relieving the internal congestion of the mucous membrane.

4. *The diet for colds.* The old adage which said, "Starve a fever and stuff a cold," is like many another of the old, time-honored sayings—it is utterly false. The truth of the matter is that a cold is essentially a fever. It frequently is accompanied by an actual rise of temperature. A cold is almost invariably caused by infection. When it does not produce a fever, it is because the body is able successfully to cope with the invading microbes, or because the disease is light and local.

Nature, as a rule, completely takes away the appetite when one is taking a cold or other infectious disease; and Nature is wise. Don't coax Mary to eat when she has a cold. Don't allow the neighbors to tempt Johnny with calf's-foot jelly or other dainties.

When one is suffering from a cold, the digestive organs are in no condition to care for food. The digestive juices are altered or entirely absent. One or two days' comparative fast will often assist in averting a severe siege of cold. A more convenient and enjoyable form of fasting would be to sub-

sist for one or two days upon fruit or fruit juices, perhaps with the addition of a little toast. An exclusive fruit diet has all the practical advantages of complete fasting, while it satisfies the appetite and supplies fruit sugar, from which the liver can manufacture glycogen to sustain the white blood corpuscles in their continuous warfare against these destructive microbes.

When one fasts for a day or two the system undergoes a spring housecleaning. Food is the fuel of the body, and when it is temporarily withheld, nature begins to skirmish around and burn up a lot of refuse and garbage which has been allowed to accumulate in various parts of the body. The presence of these waste products and acid poisons is indirectly concerned in producing colds, and their destruction or removal from the body cannot but be of advantage in the treatment of common colds.

The advantages of a fruit diet in connection with colds may be briefly stated as follows:

a. Fresh, unsweetened fruit juices require no digestion; they are all ready for immediate absorption and assimilation; they have been fully and perfectly digested in Nature's own laboratory by the powerful rays of sunlight; and since the digestive apparatus is always wholly or partially deranged during an attack of cold, it is evident that

fruit and fruit juices constitute an ideal food for the victims of colds.

b. Colds frequently result from overeating protein and starches. Fruits contain practically no protein or starches and are accordingly a perfectly desirable and safe food. Fruit juices would, of course, be equally valuable.

c. Fasting is altogether desirable in the early stages of a cold, but for a single fact: that is, fasting soon reduces the supply of glycogen (stored sugar) in the liver. Now, this glycogen is the chief food of the leukocytes—the white blood corpuscles—and these little fellows constitute the body's standing army of defense against all forms of infection. Fruits and fruit juices exactly supply the fruit sugar which is immediately available for the proper nourishment and sustenance of the leukocytes, without in the least overtaxing the crippled digestive powers or in any way adding fuel to the smouldering fires of infection.

d. Lemonade and fruit juices encourage the taking of a large amount of liquids, and that is altogether desirable in the case of those who are taking a cold.

The fruit juices also increase the alkalinity of the blood, thereby greatly encouraging the activity of the white blood cells and lessening the tendency to succumb to infection.

5. *Fresh air—better cold.* In the first stage of a cold, especially if the lungs are threatened, follow the preliminary treatment of skin and bowels by putting the patient to bed with a hot bag at the feet; comfortably cover him, and throw the windows wide open. Don't neglect fresh air in the treatment of colds. Many cases of pneumonia could have been prevented had the patient not been shut up in a stuffy room and forced to breathe foul air. It is important to keep him from chilling; the skin must be kept warm; but this should not be done by sacrificing fresh air. Freely ventilate the room and keep the patient warm and comfortable by artificial heat, using hot water bottles or electric heating pads if necessary.

6. *The question of exercise.* Some hearty individuals, when threatened with a cold, are able to abort it by taking a long walk in the open air. This is a good idea, provided that there is no fever and that the cold is taken early. In the case of weakened or only moderately strong persons, and where the cold has had a good start, it would certainly be unwise to attempt such heroic measures.

In all these matters, common sense must be used. Debilitated patients must not presume to employ unreasonable measures in their efforts to break up a cold. Heroic procedures may prove successful when employed by reasonably strong and robust

persons, but they should be used very judiciously and carefully by those who are weak and run down.

SUMMER COLDS

There is just as much danger of catching cold in the summer as in the winter and, in some respects, more. The only reason we suffer more from colds in the winter is that we live indoors then and hence breathe more foul air. This probably explains why we have so many colds in the spring of the year. We are particularly susceptible to colds because we have been shut up indoors all winter. The ideal conditions for catching cold are found on a cool summer evening when the body is tired, the vitality is pretty well used up, and the skin and underclothing are slightly moist from perspiration. These are just the conditions for producing a disturbance of the circulation. Especially is it dangerous to ride in open cars on cool evenings without suitable wraps.

Should you find any portion of the body becoming chilled, such as the back of the neck, vigorously rub it or stiffen the muscles connected therewith. Drafts are especially dangerous at night when one is tired out and perspiring.

Summer sore throat may be aggravated by taking large quantities of ice water or ices when the body is overheated or when the throat is congested from

public speaking or singing. One should be particularly careful about lying down on the porch in the cool of the evening without suitable covering for the body. In general, a summer cold should be treated along the same lines as a winter cold.

Many of our summer colds belong to the non-contagious or hay-fever group, and should be treated in accordance with their special causes.

CHAPTER VI

THE TREATMENT OF THE DIFFERENT STAGES OF A COLD

THE ordinary complaint which we commonly regard as a cold, in the majority of cases, runs a more or less definite course, passing through *three distinct stages*. The first stage is sometimes very transient and the last stage is not always reached, unless the cold is severe and tenacious. The third stage, affecting the lungs, is more likely to follow colds which are neglected or otherwise mismanaged.

The three stages of a cold are as follows:

1. The anemic or dry stage,
2. The hyperemic, or moist stage,
3. The stage of continued congestion, affecting the head, lungs, and other organs.

TREATMENT OF THE FIRST STAGE

The first stage of a cold may be called the *dry* or *anemic stage*. It is usually ushered in by a slight tickling sensation in the throat, or a dry state of the mucous membrane of the nose. One sometimes wakes up in the middle of the night with this dry

condition of the nose and throat. Prompt treatment at this stage will often prevent further progress of the infection and successfully abort the cold. The proper method of dealing with this, the first stage of a cold, is as follows:

1. *Oil the nostrils.* The moment this dryness of the nose is discovered, promptly and thoroughly anoint the nostrils with ordinary purified or borated vaseline. Where one is subject to these frequent colds in the head, he might use some oily spray, administering it to the nose by means of a common hand atomizer. If one would avoid colds, the mucous membrane of the nose must be kept moist—it must not be allowed to become dry and remain so for a very long period.

There are numerous satisfactory atomizers on the market, which can be used by those who suffer from frequent colds and who observe that such attacks are usually ushered in by dryness of the nose and throat. A very useful compound for use in the atomizer is the following oily spray:

Camphor	4 grains
Menthol	4 grains
Liquid vaseline	2 ounces

Use with medicine dropper or atomizer.

The reason that this nasal dryness is experienced more in the autumn is that winter air contains less

moisture than the summer atmosphere; it therefore increases the evaporation of the nasal secretions and results in producing increased dryness of the mucos membranes. If one especially suffers from this dryness during October and November, it might be well to anoint the mucous membrane of the nostrils slightly with a little borated vaseline upon going to bed, or to use the atomizer with the oily spray. (See prescription on page 81.)

I think that the ordinary atomizer which simply puts a gentle spray up the nose and down the throat accomplishes very little. If this sort of treatment is to be effective, it must be quite prompt and heroic. I have found it best to put plenty of these solutions in the nose and throat by means of a medicine dropper.

2. *Throat gargling.* In the early stages of a dry and tickling throat, repeated gargling of an anti-septic solution may be of some value in preventing subsequent sore throat, but I am somewhat skeptical of the usefulness of all throat gargles—notwithstanding that I continue to use them in the majority of colds and sore throats. The alkaline gargles are most helpful.

Most persons have their own favorite gargle—one they will no doubt continue to use—but a good old standby is Dobell's Solution. For formula see page 56.

Let me warn the reader against the practice of too vigorously snuffing salt water or other solutions up the nose—it is a dangerous procedure. Unless you have been properly instructed, it is also unwise to resort to the use of nasal douche cylinders or other technic for irrigating the nostrils. This practice of snuffing solutions up the nostrils may result in producing serious ear infections if it is done carelessly.

Warm soda or salt solutions are useful gargles. These solutions may be made by simply adding one teaspoonful of common table salt or the same amount of ordinary baking soda (sodium bicarbonate) to one glass of warm water.

The method of treatment which is most effective in applying antiseptics to the nose and throat is to lie down on your back, and with a medicine dropper drop two or three dropperfuls of some oily antiseptic into the nose, letting it run back into the post-nasal passages and on down into the throat. You can do this every ten or fifteen minutes for a few hours during the onset of a cold. (See formula on page 81.)

Let me emphasize that all these efforts to prevent or “break up” a cold must be put forth during the first hours of the impending infection. These local treatments are of little value if their employment is postponed until the cold is well under way.

Measures for cold prevention must be prompt, heroic, and persistent.

One of the best preparations for mouth washing and throat gargling with which I am acquainted is the following:

Sodium bicarbonate	$\frac{1}{2}$ dram
Sodium biborate	$\frac{1}{2}$ dram
Sodium benzoate	1 grain
Eucalyptol	$\frac{2}{3}$ drop
Menthol	$\frac{1}{3}$ grain
Distilled water	8 ounces

Dissolve and mix. Use frequently as mouth wash and throat gargle.

Now, if the cold should prove to be the first stage of whooping-cough or any other contagious malady, this mouth cleansing and throat gargling is just the very treatment to lessen the severity and prevent undesirable complications. Of course, when the germs of colds or other infections have been allowed to develop unhindered for some time—when they have already got in their deadly work—it is well nigh useless to attempt to thwart them by the mere use of washes and gargles. Other and more general curative measures must be promptly adopted and carefully followed.

3. *Massage to nose and face.* Vigorous rubbing of the nose and face for fifteen or twenty minutes

is a great help in this early stage of these infectious colds. This rubbing sometimes gives immediate relief from the annoying nasal dryness, producing an abundant flow of the natural secretions. Make sure that the feet are warm during this procedure. The electrical vibratory machines now so commonly used in barber shops are very useful when employed in the early stages of a cold; they greatly increase the circulation in the mucous membrane of the nose and produce almost immediate sneezing, accompanied by a normal flow of the germicidal solution of the nostrils, which at once destroys and washes away myriads of the mischief-making microbes.

4. *The heating compress cap.* Colds in the head may be frequently stopped by the following simple procedure, which requires nothing more than cold water and an ordinary rubber bath cap, such as ladies wear to prevent the hair getting wet while in bathing. (See Figure 7.) This treatment is particularly adapted to boys and men, although it can be taken by women who do not have a superabundance of hair. Massage and rub the scalp with the fingers frequently dipped in ice water. Keep up this procedure for ten or fifteen minutes until the scalp is wet and the hair slightly moist. Put a tightly fitting rubber cap over the head, carefully covering all the wet hair. (See Figure 7.) This

cap should be worn all night. Remove in the morning and administer thorough friction to the scalp with the fingers wet in ice water. Thoroughly dry the hair and wear a skull cap throughout the day. This treatment will frequently relieve an annoying cold in the head if it has not continued too long or become chronic, and provided there is not an infection of one of the many air chambers opening into the nose.

5. *Heating compress to the throat.* It will be best to describe this throat compress in sections, so that the reader may thoroughly understand how to prepare and apply it. (See Figure 8.) This compress is indicated in the early stages of colds, sore throat, and tonsillitis. It is a very valuable treatment if properly applied.

a. Take a piece of linen cloth, one or two thicknesses—or cheesecloth, four or five thicknesses—between three and four inches wide and about twelve inches long (long enough to go around the throat nicely and overlap). (See Figure 9a.) This is wet in ice water or cold water and is applied next to the skin and wrapped snugly about the neck. It should be wrung out of the water dry enough so that there will be no danger of dripping, but considerable moisture should be left.

b. Over this piece of wet cloth wrapped around the neck, wrap a piece of mackintosh or oiled silk,

of the same length and about a quarter of an inch wider, to make sure that the edges of the wet cloth underneath it are fully covered. (See Figure 9b.) In an emergency one can use newspapers, table oil-cloth, paraffin paper, oiled silk, or any other waterproof material.

c. The third layer, or outside covering, should consist of one or two thicknesses of flannel about four inches wide, to be wrapped snugly around the neck and carefully pinned on with safety pins, so as to prevent evaporation of any of the moisture from the wet cloth next to the skin. (See Figure 9c.) This linen cloth next to the skin should be slightly moist when the compress is removed next morning, for it is intended that this throat compress should be worn all night. The compress in place is shown in Figure 8.

This constitutes the best-known local and external treatment for incipient sore throat, colds, pharyngitis, tonsillitis, etc., together with hoarseness and tickling of the throat. This compress should be put on at night, and when it is taken off in the morning, the throat and the back of the neck should be thoroughly rubbed, either with ice or with ice-cold water and a rough towel for about five minutes, and then carefully dried. *Do not forget this application of cold when the compress is removed in the morning;* it is absolutely necessary to prevent

chilling of the throat during the day. If desired, a single thickness of dry flannel or a silk handkerchief may be worn about the neck during the day.

6. *The hot foot bath and hot drinks.* As an aid in equalizing the circulation, the hot foot bath, previously mentioned, is of great value and should be accompanied by drinking an abundance of hot lemonade and by cold applications to the head.

TREATMENT OF THE SECOND STAGE

The second stage of a cold represents the *hyperemic, moist, or congestive stage*. In contrast with the dryness of the nose and throat during the first stage, this stage is characterized by a moisture and a great increase of secretions from the mucous membrane. The nose is running, and the amount of mucus one pair of nostrils can secrete in an hour's time during this stage of an active cold is indeed surprising. If the disease has progressed to this stage, more vigorous and constitutional measures are required to combat it. In general, colds at this stage may be handled as follows:

1. *The hot-blanket pack.* (See Figure 10.) If no more convenient form of sweating bath is available, resort to the hot blanket pack in accordance with instructions given under the head of "The General Treatment of Colds" on page 70. The patient may be kept in the pack, if the head and

heart are not disturbed, anywhere from fifteen minutes to three-quarters of an hour, or until such time as he sweats profusely. If the heart is disturbed during the pack, it may be quieted by the application of an ice bag over the region of the heart for ten or fifteen minutes.

2. *The cold-mitten friction.* (See Figure 11.) In all cases where the hot-blanket pack is given, it should be concluded with a *cold-mitten friction*, after which the patient is put to bed. The following is the proper method of giving the cold-mitten friction, which is one of the most valuable means of promoting skin circulation. Make a loose-fitting mitt for the hand out of mohair cloth or Turkish toweling or any other rough fabric. Have two or three quarts of ice water in a vessel by the side of the bed. Have the patient bring one arm out of the hot-blanket pack, and after placing towels about the bed coverings so as to avoid wetting them, take the patient's hand in your left hand and with the mitt on your right hand, dip it into the ice water, squeeze out some of the water, and then vigorously rub the patient's arm. Repeat the procedure two or three times, if necessary, and continue rubbing until the skin of the arm is pink, and a good reaction is secured. Now, quickly dry the arm and cover it with dry towels or the dry blanket. Avoid both chilling and secondary sweating.

The whole body is gone over after this fashion, taking next the other arm, then the chest, the back, and then the legs, one at a time. This treatment is of great service in fighting colds, even without a long sweat before it; but it is usually better to administer first some sort of hot bath, to bring the blood to the skin, before giving this cold treatment which, as I have emphasized before, is an absolutely necessary conclusion to all hot sweating baths recommended for the treatment of colds.

3. *Light fruit diet.* During this stage of the cold, the diet should largely be limited to liquids, to fruits, or simple foods, such as toast. For a few days it will be well to avoid meat, nuts, and eggs, as well as other nitrogenous foods, such as beans and cheese. Let the patient have all the oranges and fruits desired. The reader is referred to the discussion of diet in relation to the prevention of colds on page 61, and to fasting or fruit diet in the general treatment of colds on pages 74-76.

4. *Keep the skin active.* At all hazards, the blood must be kept circulating in the skin, or we shall be compelled to face the dangers of the third stage of the cold—the congestion and inflammation of some internal organ. If the skin is rough and harsh, rub daily with cocoa butter or olive oil. The skin must be kept warm and active, and keeping it so will be greatly aided by supplying the body with

an abundance of liquids so as to encourage the normal action of the sweat glands.

Of course, such methods as mouth washing, gargling, and fresh air, as recommended for the treatment of the first stage of the cold, are all to be used as indicated, in the treatment of this, the second, or hyperemic stage of a cold.

5. *Rest in bed.* When a cold has progressed thus far, it is usually unwise to undertake to wear it out, and it is hardly possible that it can be successfully broken up. It is far better to go to bed for a few days and give the system a fair chance to fight the enemy. It is hazardous to go about one's work with a fever—nothing can be gained by it.

When the system is flooded with the toxins of cold or influenza germs, both the nervous system and the heart are placed under an extraordinary strain. Nervous disorders later in life, as well as heart failure, have no doubt had their foundations laid when their victims went on about their work, refusing to take time for rest, when suffering from a "bad cold," or a "little touch of the grippe." Both time and money are saved by a little judicious rest at such times. A few days' rest in bed may avert serious and painful complications at a later date in life.

6. *Local application to the nostril.* As a rule, sufferers from colds are more at ease if the atmos-

phere can be kept slightly moist. Steam inhalation is usually very acceptable. One should be careful not to wash out the nose with cleansing solutions when there are great swelling and severe infection—it might result in infecting the ears. There is great danger from carelessly snuffing salt water up the nose during this stage of a cold. Under such conditions it would be best to use some kind of antiseptic and oily spray by means of a small hand atomizer. The following prescription will be found very agreeable—considerably relieving the irritation and lessening the secretions:

Menthol	6 grains
Camphor	6 grains
Liquid vaseline	3 ounces.

Mix, and label: Use in atomizer as nasal spray, or with a medicine dropper.

Your physician's prescription for a cough medicine, which can be filled by your druggist, should be followed. Avoid using patent nostrums. Use the will power in controlling dry, hacking, unproductive coughs. An excellent cough reliever is obtained by inhaling the fumes of a steaming dish of water in which one-half teaspoonful of compound tincture of benzoin has been dissolved.

When the throat is unusually sore, it may be painted or swabbed with a ten per cent solution

of argyrol. Don't fail to have a competent physician examine all cases of sore throat, especially in children, to make sure that the case is not one of diphtheria. Still better, have all children immunized by the administration of toxin-antitoxin.

3. TREATMENT OF THE THIRD STAGE

Ordinary colds which have been allowed to progress usually continue to the point where the air spaces in the head or some internal organ are more or less affected. As a result of the blood leaving the skin, the internal organs of the body are more or less congested. It may be the throat, the lungs, the ears, or some of the air spaces in the skull (giving rise to chronic colds in the head), or it may be some organ not connected with the respiratory tract, such as the intestines or the kidneys. It is a quite common experience for young boys to have diarrhea following their first attempt to go barefoot in the spring. This is due to getting the feet and legs chilled and causing a congestion of the abdominal viscera.

The treatment of the third stage of a cold becomes far more important and serious than the treatment of the two preceeding stages. We seriously doubt the wisdom of anyone undertaking to treat this stage of a cold without medical assistance. In fact, we believe it is a great mistake to neglect

any serious cold or a case of grippe, allowing these ailments to drift along without medical attention. The consequences of influenza are sometimes unusually serious. The further treatment of colds which have apparently settled in some part of the body, usually in the lungs, is as follows:

1. *Continue the general treatment suggested for the second stage.* In the third stage of colds, it is equally important to keep the blood circulating in the skin, to keep the bowels open, to give the same hot and cold treatment to the skin, to supply the body with an abundance of liquids, to keep up the light diet, and more particularly, to supply an abundance of fresh air and enforce absolute rest and physical quiet.

The third stage of a cold usually involves the lungs and is manifested by coughing, soreness in the chest, deranged breathing; it may vary in severity from a mild bronchitis to a typical pneumonia.

2. *Hot fomentations and cold-mitten friction to the chest.* In these cases of mild "cold on the lungs," it will be well to treat the chest both front and back by applying hot flannel cloths, wrung out of boiling-hot water, to the skin. These cloths should be about the size of a fourth of a single blanket, and be thoroughly wrung out. A dry flannel cloth should be laid over the chest, the hot

wet cloth being placed upon this, and the whole covered with another dry flannel cloth. For a fomentation to be effective it should be quite disagreeably hot. Just as soon as it feels warm and comfortable it should be changed and a new hot cloth applied. After three or four of these hot applications, the chest should be vigorously rubbed with cold water, preferably ice water, as described above under the head of the "cold-mitten friction." The same treatment should be given to the back of the chest, and may be administered three or four times a day, when the lungs are tight or congested. Always begin with the hot cloths and end with the cold friction.

3. *The hot hip-and-leg pack.* This treatment is very useful in relieving congestion of the lungs. Even in the treatment of regular pneumonia, depend upon this procedure quite as much as upon other treatments which are given directly over the lungs. This pack is given after the same methods described for the full hot-blanket pack, only it does not take in the chest and arms. It covers the legs, hips, and the lower part of the abdomen. (See Figure 10.) This treatment greatly enlarges the blood vessels of the lower extremities and directly drains the blood away from the head and chest to the hips and legs. It is well to give the hip-and-leg pack in connection with the hot and cold treat-

ment of the chest, as this represents an ideal combination to relieve congestion of the lungs.

4. *The chest pack.* At night, before the patient retires, if the lungs are "tight," the chest pack may be applied as follows: (See Figures 12-15.)

a. Take two ordinary towels, wet them in ice water and wring until quite thoroughly dry. Place one over each shoulder, allowing it to come down diagonally across the chest and likewise across the back. (See Figure 12.)

b. Have in readiness for this time a jacket made of oiled silk or mackintosh cloth, or some other waterproof material like ordinary table oilcloth, which can be quickly pinned over the patient's chest, front and back, coming well up over the shoulders, so that the entire chest is thoroughly covered, making a snug fit around the neck and both arms. (See Figure 13.) All this should then be covered with a flannel jacket made out of two thicknesses of blanket or, with what is more convenient, two pairs of ordinary underdrawers. (See Figure 14.) Placing the body of one pair of drawers over the chest, draw the legs over the shoulders, cross them at the back, after which they are drawn forward around the sides and pinned to the trunk in front. The other pair of drawers has its trunk placed over the back, the legs brought forward over the shoulders, crossed over the chest,

and carried around the sides backward to be pinned at the back. The complete pack in place is shown in Figure 15.

The wearing of this chest pack during the night will often serve to loosen up a bad cold on the lungs, and two or three nights will suffice to cure some of the worst of colds which have settled on the lungs. On removing this chest pack in the morning, *the chest and back should be rubbed thoroughly with ice water and very carefully dried.* This is important and under no circumstances must it be neglected. A thin extra shirt may be worn during the day, and it is well to anoint the chest with cocoa butter or a little vaseline. This latter instruction is imperative.

The further treatment of the third stage of a cold entirely depends upon its seriousness and persistency, and detailed directions cannot be fully or safely given here, as the treatment of serious inflammations of the lungs and other internal organs following severe colds is of serious importance. They are matters belonging entirely to the attending physician.

CHAPTER VII

ADENOIDS AND THE TONSILS

WE HAVE previously considered adenoids as one of the predisposing causes of frequent and recurrent colds, but adenoids and also the tonsils, especially in the case of children, are deserving of more than passing notice.

WHAT ARE ADENOIDS?

It is entirely appropriate to study adenoids in connection with the tonsils and tonsillitis, for, in reality, adenoids are but a hypertrophy or enlargement of a certain small tonsillar body or lymph gland, known as the *pharyngeal tonsil*. This little body, for it is indeed quite small when not enlarged by disease, is located in the middle line on the roof or vault of the throat directly behind the nostrils and just above the soft palate. It directly covers the opening of a minute canal which leads from the throat up to the region of the pituitary body at the base of the brain.

The purpose of this little tonsil in the roof of the throat is practically unknown to medical science. In fact, the function of even the larger tonsils in

the throat still remains more or less of a physiological mystery. All this tonsillar tissue can be taken out of the throat without producing the least discoverable ill-effect on the health of the patient.

When this little pharyngeal tonsil is irritated or inflamed, its peculiar structure permits it to enlarge and extend until it may completely fill the vault of the throat, and so effectively stop up both nostrils as to render it impossible for any air to find its way through the nose to the lungs. This condition of affairs compels its victims to develop into mouth-breathers.

The very location of adenoids at once suggests great possibilities for mischief. They are in position to interfere seriously with breathing, and when their infectious secretions drop down into the throat, they are able to derange digestion and disorder the bowels. They also occupy a position which enables them to affect the important special senses of smell, hearing, and taste.

THE CAUSES OF ADENOIDS

In early infancy, the pharyngeal tonsil, from which adenoids always develop, is a very tiny and insignificant structure, composed of tonsillar or lymph tissue. It is found to obey the general laws of lymph tissue; and one of the peculiarities of this particular tissue, especially in the case of children,

is that the presence of germs or bacterial toxins invariably produces hypertrophy, enlargement—enormous overgrowth.

Adenoids may make their appearance at any age. They are commonly observed in children from five to fourteen years of age, but in many instances they make their appearance in the first or second year of life; even children but a few months old have been found to have adenoids. Adenoids of sufficient severity to affect the health of the child are probably found in but a trifle more than five per cent of the children, certainly not over ten per cent; while in the case of deaf mutes, it is found that over seventy per cent are afflicted with adenoids. This fact alone is a strong suggestion as to one of the potent causes of deafness.

It is highly probable that the pharyngeal tonsil may be first irritated and thus started on its career of mischief-making, by the severe throat irritations and infections which almost invariably accompany the various diseases of childhood. The throat is usually severely inflamed in scarlet fever, measles, diphtheria, etc., and it is not unlikely that these diseases prove the starting-point for adenoids; at least in many cases this is undoubtedly the real exciting cause of this troublesome disorder.

In other cases it is probable that adenoids make their appearance following several severe and per-

sistent attacks of the "snuffles"—neglected colds. Thus, while adenoids often may be responsible for colds in the child of eight or ten years of age, it is highly probable that a succession of colds in the head earlier in life was directly responsible for the adenoids. For this reason, if for no other, colds in babies and young children should never be neglected. Their colds should be antiseptically and intelligently treated, and not be allowed by neglect to set in operation inflammations of the throat, which are almost sure to end in the production of a liberal crop of adenoids.

While adenoids are not hereditary, they often appear to be a family characteristic, and it is quite likely that certain characteristic features running through one family for successive generations owe their facial peculiarities to the early development of adenoids, which in turn, are responsible for certain characteristic formations of the nose and face. Climate plays but little, if any, part in the causation of adenoids. It seems to be largely a question of the general health of the child and certain local irritations and inflammations of the throat and nasal passages.

THE SYMPTOMS OF ADENOIDS

It is important that parents, guardians, and teachers, as well as physicians and nurses, should

be well informed concerning the symptoms of adenoids, that they may be early detected and promptly removed, before permanent injury has been done to the features, mind, and health of the child. The symptoms of adenoids may be divided into two great classes: the objective symptoms, that is, signs which the parent or physician can observe in the child; and the subjective symptoms, that is, the manifestation of the disease which the child himself experiences.

1. *Objective symptoms of adenoids.* First and foremost, adenoidal children are mouth-breathers. The mouth is constantly open to some degree, and it is of little use everlastingly to admonish these children to stop breathing through their mouths. A healthy child will never breathe through his mouth, unless the nose is or has been stopped up. And so mouth-breathing is the chief and characteristic evidence of adenoids.

The facial expression is characteristic. The child has more or less of a vacant stare, a listless look in the eyes. Because of the under-development of the upper jaw, the upper lip is usually thick and short, while the under jaw, being larger in proportion, protrudes somewhat.

The adenoidal child is usually regarded as stupid. This mental stupidity and inattention to its surroundings probably results from a dulling of

the hearing; and the hearing has been injured by the extension of catarrhal inflammation from the adenoids lying about the mouth of the eustachian tube through the tube to the ear. The eustachian tube presents a direct channel of communication between the throat and the ear, its purpose being to equalize air pressure in the ear. Its presence is indicated by the feeling of escaping air in the ear when one makes a quick elevator trip from the top to the bottom of a high building.

These children are always under-sized, pigeon-breasted, several inches short for their ages, and five to ten pounds under the average weight. They suffer from general backwardness, and are usually two or three grades behind other children of their own age in their school work. They soon develop high-arched palates and narrow pointed noses. These deformities are due to the fact that Nature makes no effort to preserve useless structures. Accordingly, when the adenoids stop up the nostrils and the nose ceases to function as a breathing organ, Nature proceeds to enlarge the mouth upward, encroaching, more or less, upon the nose. This change in development not only accounts for the peculiar, narrow face of the adenoid victim, but also accounts for the crowding of the teeth and for their prominent and irregular appearance, together with the pinched and contracted nostrils.

Neglected adenoids always result in some degree of facial deformity.

The voice is muffled, the resonance diminished. The tone is dull and dead. The breath is fetid and disagreeable, resulting directly from the festering mass of adenoids in the throat, and indirectly from the stomach disorders which always accompany this deplorable state of affairs.

These children are slow to respond to commands and dull in following directions, not only because of their stunted mental growth, but also because they are usually hard of hearing, and their perception has thus become more or less dulled.

In a child possessing the symptoms illustrated in Figure 16 (see page 105), the physician never fails to find adenoids upon inserting the examining finger into the vault of the pharynx.

2. *The subjective symptoms of adenoids.* The symptom which the child himself first experiences is a loss of appetite. He complains of a bad taste in his mouth, the sense of smell is considerably impaired, he loses more or less of his relish for his former favorite dishes, and becomes subject to numerous and frequent attacks of biliousness and stomach trouble, followed by marked distention of the abdomen.

The child soon presents evidence of a chronic nasal catarrh and, if old enough, complains of



Figure 16—*Child with Adenoids*

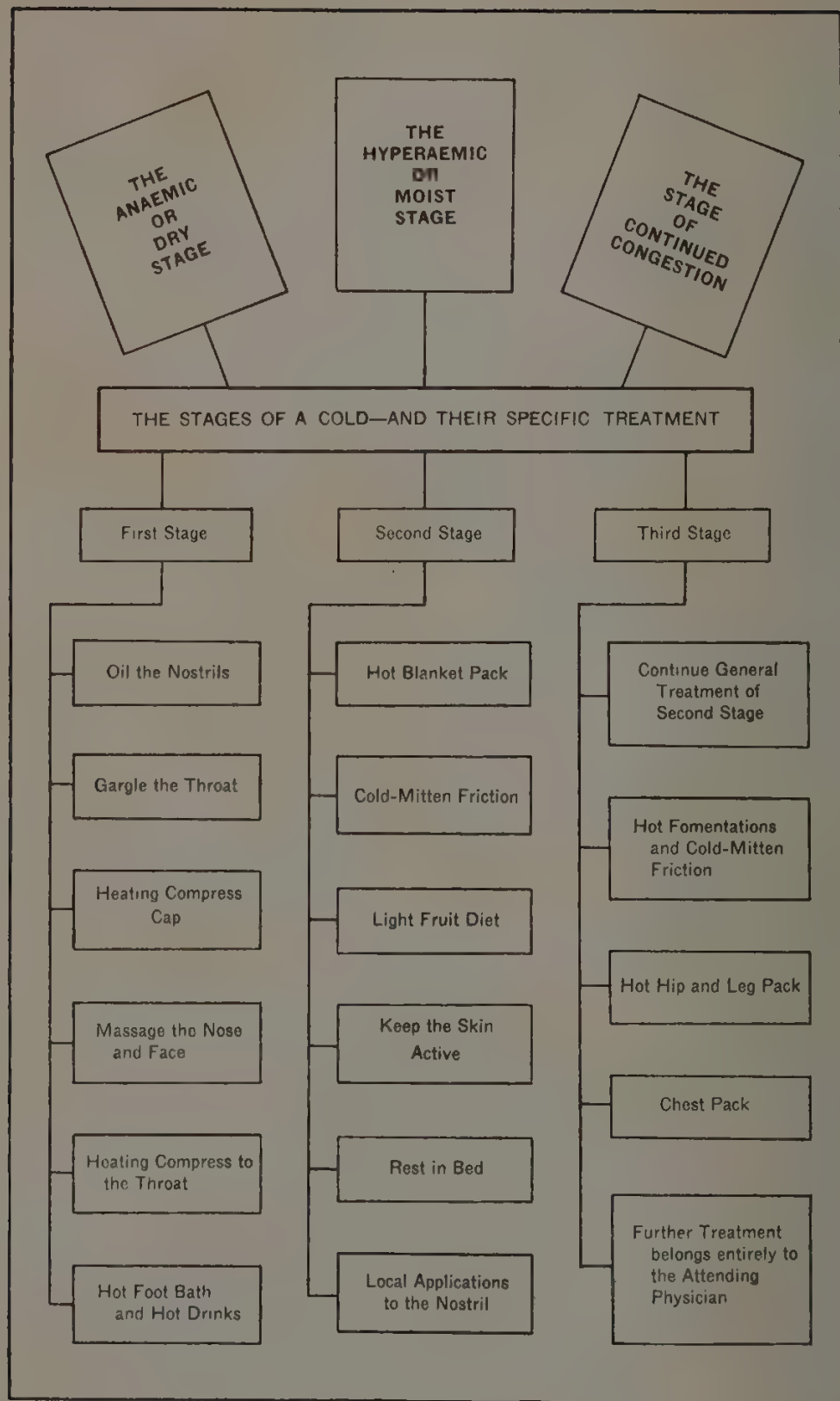


Figure 17—*The Stages of a Cold*

constant dripping of mucus down into the throat. If above five or six years of age, he is found constantly hawking and spitting to avoid swallowing these adenoid secretions. About this time he may be subject to frequent slight attacks of fever. These spells of fever may be due to the disturbances going on in the stomach and bowels, or they may result from the absorption of an unusual amount of the poisonous toxins of the bacteria which live and thrive in this festering mass of adenoid tissue.

The child soon begins to lose all interest in both work and play, and only with difficulty can his attention be concentrated on any one thing. He seems to have lost his powers of concentration. He is extremely restless through the day, fretful and peevish, and manifests a tendency to go from one thing to another. At night he is exceedingly restless, rolling and tossing about in bed and constantly throwing off the covers. He is frequently disturbed by night terrors. In many cases, these children when young are victims of nocturnal enuresis—wetting the bed at night.

Direct infection of the ear—manifested by frequent attacks of earache—makes its appearance. The entire mental development of the child is arrested, often the speech becomes defective, and such a complete change in the facial expression is produced that, unless the adenoids are promptly

removed, the lines of this facial deformity may be carried throughout life. This, then, is the picture of the adenoidal child—a picture to alarm any parent and lead to quick remedial efforts.

THE REMOVAL OF ADENOIDS

Attention has been called to the fact that adenoids are located directly over the mouth of a minute canal which leads from the roof of the throat up to the pituitary body at the base of the brain; and it has been suggested that many of the marked effects of adenoids upon the mind are produced by the influence of the poisons which may pass up through this canal to the brain.

It is a well-known fact that this little pituitary body exerts a very profound influence upon the physical development, and it may also be discovered that it directly influences mental development. Enlargement of the pituitary body produces the well-known disease of over-development called *giantism*, and it is also responsible for another form of overgrowth affecting certain parts of the body and known scientifically as *acromegaly*. It has long been known that diminution of the pituitary body results in producing dwarfs. This little body also secretes substances which exert a very direct influence in raising and lowering the blood pressure.

It is nothing more or less than criminal for parents and guardians knowingly to allow children to go along harboring these dangerous adenoids when a simple operation of but a few moments' duration will result in their complete eradication. We are aware that even some physicians have taught that if adenoids are not very bad, they could be left alone and that they would dry up or go away at puberty. But this is now known to be a false doctrine. Adenoids are not especially prone to go away at puberty. They may persist indefinitely; besides, when they are allowed to remain for several years, they result in producing a characteristic permanent deformity of the nose, jaw and other features.

Again, the fact must not be overlooked that adenoids are responsible for by far the majority of earaches as well as the majority of the colds which appear in children suffering from these diseased growths. It must not be forgotten that more than two-thirds of all children who have adenoids have their eustachian tubes involved. As a consequence, the ears are more or less diseased.

When the tonsils are enlarged, adenoids are nearly always present; but it does not follow that when adenoids are present the tonsils are always enlarged. The tonsils are enlarged in only about one-third of the cases having adenoids.

The operation for the removal of adenoids is such a slight affair, especially in young children, that its performance should never be postponed for a single week when the presence of these growths is detected. When adenoids are suspected, the child should immediately be examined by a competent physician, that the facts may be ascertained and action taken.

There is no operation in modern surgery, not excepting its most skilful procedures, which can exhibit such a triumph in the line of immediate achievement and spectacular results as the simple operation for the removal of adenoids. Within a few short weeks following the operation, the child develops a good appetite, rapidly puts on flesh, takes a new interest in both work and play, sleeps well, exhibits marked increase in its powers of attention, becomes one of the brightest pupils in its class, the entire expression of the face changes—begins to beam with intelligence; the former listless child is now alert; the hearing, if it has not been permanently impaired, begins rapidly to recover; the fetid odor of the breath disappears; the digestive disturbances pass away. In fact, the transformation is so marvellous, so complete, and so sudden, that it proves conclusively that the poisonous excretions of the adenoidal mass were being carried by the blood stream to every cell of brain

and body, and, that as a result, the entire being was so saturated and steeped with these toxins as effectually to retard all development. Upon the complete removal of these festering sores, the young life takes on a new lease and begins to bud and blossom in a most astonishing and unexpected manner. The results of the removal of adenoids are immediate and spectacular.

THE TONSILS—TONSILLITIS

The larger tonsils on the sides of the throat, as far as our present knowledge goes, are just about as useless as the small tonsil in the roof of the throat which is primarily responsible for the development of adenoids. When healthy, the tonsils may serve as a barrier to the entrance of germs into the system from the throat. But when the tonsils have once become diseased, when they have passed through several attacks of inflammation, they become more or less permanently enlarged, and if they ever possessed a useful function, it is entirely lost. Such diseased tonsils are hotbeds for the development of microbes and are a great menace to the health of both children and adults, and no time should be lost in bringing about their complete removal. (See Figure 1.)

As previously suggested, merely clipping off enlarged portions of the tonsil will not suffice; the

entire tonsil with its capsule must be completely and carefully dissected out by a competent surgeon, as leaving in the throat small portions of the diseased tonsil will give rise to further mischief.

There can be little doubt that many cases of rheumatism, rheumatic fever, and even serious heart disease in the case of young boys and girls, owe their origin to diseased tonsils. It is highly probable that the healthy tonsil would be but little larger than a pea or, at most, a Lima bean; so it is evident that practically all the enlarged tonsils we see in children, youths, and adults are more or less diseased and permanently hypertrophied. We cannot but believe that if some of the energy that has been spent in taking out the appendix had been devoted to taking out tonsils and adenoids, the race would have profited equally.

Diseased and enlarged tonsils, then, must be put in the same category with adenoids. They can only work mischief and therefore should be promptly and completely removed. To retain them can only mean frequent colds, sore throats, and possible attacks of rheumatism; even the more serious complications of bronchitis, pneumonia, and tuberculosis are favored by the presence of these germ-breeding and germ-spreading diseased structures.

If the tonsil is sufficiently diseased to necessitate its removal, it is well to emphasize the importance

of having it properly dissected out—enucleated. The older methods of tonsil-clipping, practiced one or two decades ago, are wholly unsatisfactory. If a tonsil is sufficiently diseased to necessitate its removal, it should be taken out in accordance with good surgical procedure—it should be enucleated—removed in its entirety, capsule and all.

When tonsils are surgically removed by a competent operator they seldom return, but even the best of nose and throat surgeons will sometimes have the field of operation so obscured by hemorrhage as to result in the overlooking of a tiny bit of tonsillar tissue. In this event the neglected remnant may enlarge and subsequently make considerable trouble, necessitating its removal.

CHAPTER VIII

INFLUENZA—LA GRIPPE

WHILE common colds are undoubtedly frequently caused by one of the various influenza organisms, nevertheless, *la grippe*, as an epidemic disease, must always stand out separate and apart from colds. It is by far a more serious illness than the common household cold.

Influenza is an acute infectious disease accompanied by more or less fever. It spreads with extraordinary rapidity from town to town, and from continent to continent, and is notorious in that it indiscriminately attacks such a large percentage of the population. It is a disease manifesting itself largely by inflammations of the respiratory mucous membranes, great and sudden physical prostration, and not infrequently by complications and inflammations in various internal organs and other parts of the body.

THE CAUSE OF INFLUENZA

In 1892 it was thought that Pfeiffer had discovered the bacillus responsible for epidemic influenza, but since the last world-wide epidemic of

the "flu," considerable doubt has been cast upon this belief. Many authorities are now disposed to regard the "flu" as a disorder caused by a group of microbes. The world epidemic influenza seems to confer a long immunity upon its victims, but the ordinary type of ever-present "flu" does not establish immunity for any considerable length of time. In this way the "flu" differs from most of our contagious diseases.

Three distinct forms of influenza are now generally recognized. They are:

1. *Epidemic influenza.* This is the disease in its most virulent form, and represents the degree of infection found in the great world epidemics, such as that which last visited this country in 1919. In the epidemic of 1889 it first appeared in the far provinces of Russia in October; in November it was in Moscow; two weeks later Berlin was smitten; in the middle of December the disease appeared in London; by Christmas, New York had succumbed, and the infection was rapidly whisked over the entire continent. Within a year it had encircled the globe and had smitten the people of every clime.

2. *Endemic-epidemic influenza.* This is the form of the disease appearing for several years following the great world epidemics and is a genuine influenza, although, as a rule, it is not quite so

severe and is not followed with such a large percentage of fatalities.

3. *Endemic influenza*, or so-called *catarrhal fever*. This is the milder form of disease, which, while it is caused by the "flu" bacilli, is not nearly so severe as the preceding forms. It represents the disease which, when it is too severe to pass for a common cold, is usually described under the terms of "the grippe" or "a slight touch of the grippe."

THE SYMPTOMS OF INFLUENZA

As a general rule, influenza proves to be an inflammatory disease of the nose, throat, and lungs; but not infrequently the poisons of these germs seem to localize in other parts of the body, giving rise to an entirely different type of the disease. As the respiratory type of the disease is by far the more common, we will give chief attention to the symptoms of that form.

Influenza usually makes its appearance about three or four days after one is exposed to the germs. As a rule, the first symptom is a sudden chill, accompanied by profound physical weakness—prostration. In the typical cases, where the nose, throat, and lungs are chiefly affected, there appears a profuse watery discharge from the nose. The dry stage of the nose and throat, comparable to the dry stage which precedes the moist or running

stage in common colds, is usually very brief and sometimes unobserved in influenza.

Severe pain soon appears just back of the eyes. There is also great pain in the back and in the legs; the pain is sometimes described as being in the bones; the patient literally aches all over. The fever is usually quite high, and the patient sometimes complains of intense general soreness—pain in both muscle and bones.

The lungs are more or less affected, the patient begins to cough, and the sputum which is coughed up is of a characteristic greenish-yellow color and more or less lumpy. *La grippe* frequently runs into pneumonia, and these influenza pneumonias are exceedingly dangerous.

The nervous symptoms of influenza, in addition to the pain already described and the profound and extraordinary prostration, may extend to the point of producing delirium; in one form of the disease there may result an actual meningitis.

In rare cases, the poisons of the germs seem more to affect the bowels; in these cases there is nausea, vomiting, colic, diarrhea, or even jaundice.

Influenza is the great disease of dangerous complications. While it spares most of its victims, and they apparently fully recover, it accomplishes its deadly work by weakening the system, undermining the vitality, and permanently crippling one

or more of the internal organs. The after-effects of the "flu" are sometimes most disagreeable.

Some victims of the grippe never fully recover the health of the lungs. They linger on for years with more or less of a chronic bronchitis, and eventually develop tuberculosis. In others the heart seems to be permanently affected. They live for years with weak hearts and finally die of heart failure. Thousands die annually of influenza-pneumonia, pleurisy, etc. In other cases the disease is followed by severe diseases of the eyes and ears, while a not uncommon complication is nephritis or inflammation of the kidneys.

THE DIAGNOSIS OF INFLUENZA

Bad as are our common colds, and their consequences when neglected, influenza is by far worse. Under no circumstances should the layman ever assume the great responsibility of treating influenza. The best of medical assistance should be secured to assist in combating this dangerous and treacherous disease. While I recognize that the average reader will probably not call a physician when but slightly suffering from an ordinary cold, I wish to insist upon the necessity of calling medical help when smitten with influenza or the grippe. I have therefore prepared the following table, a parallel arrangement of the symptoms of

a common cold and those of influenza, that one may be able to tell at once, and at a glance, the difference between the two ailments and thus be able to form a fairly accurate opinion as to the nature of his disease.

*SYMPTOMS OF INFLUENZA
OR LA GRIPPE.*

1. *Onset:* Sudden — without warning or previous hint. Strikes as by an unseen hand.
2. *Chills and fever:* Definite chills and marked fever. More or less sudden appearance of both.
3. *Prostration:* Profound, sudden and continued, out of all proportion to the other symptoms.
4. *Coryza:* Watery discharge begins at once, little or no recognizable dry stage preceding its appearance.
5. *Sore throat:* Not such a constant symptom, unless complicated by tonsillitis. General soreness; diffuse redness.
6. *Headache:* Usually severe, often in the eyes or at the back of the head; hard to control; often described as a "splitting headache."
7. *Backache:* Nearly always present — severe — characteristic.

*SYMPTOMS OF A COMMON
COLD*

1. *Onset:* Not so sudden; usually passes through a warning stage.
2. *Chills and fever:* Chilliness rather than definite chills; fever not so marked, or absent—so-called inward fever.
3. *Prostration:* Not so profound—merely a general weakness, just a general "good-for-nothing feeling."
4. *Coryza:* Comes on gradually, preceded by a dry stage lasting from a few hours to several days.
5. *Sore throat:* Usually an early symptom, especially when tonsils are diseased. May begin with slight tonsillar soreness.
6. *Headache:* Not so profound; eyes not so affected; usually in forehead or more to back of the nose; not always present. May be general.
7. *Backache:* Not usually present—only a feeling of weakness in the back.

*SYMPTOMS OF INFLUENZA
OR LA GRIPPE.*

8. *Pain in the legs:* Usually marked and severe.
9. *Pain in the bones:* A characteristic pain of influenza.
10. *Temperature:* Fever runs high for several days—from 100 to 105 degrees, or even 106 degrees, in severe cases.
11. *Sputum:* Usually a characteristic greenish-yellow, containing many coin-like lumps.
12. *Lung complications:* Lungs usually involved. Severe complications often make early appearance.
13. *Nervous symptoms:* Very marked. In some forms resembling meningitis. Patient usually restless and sleepless. In severe cases, delirium.
14. *Influenza:* Travels more in epidemics, although it is ever present with us. It runs through a town or a nation.
15. *Sequelæ:* Leaves its victims prostrate. Is followed by lung, kidney, heart and nervous diseases. Results of a single attack may be life-long. Patient remains greatly weakened for two or three weeks.

*SYMPTOMS OF A COMMON
COLD*

8. *Pain in the legs:* Not usually present.
9. *Pain in the bones:* The bones do not especially ache in colds.
10. *Temperature:* Fever absent or runs low; usually comes on more gradually and runs from 99 to 101 degrees.
11. *Sputum:* Not characteristic; may vary in color and form—yellow, white, or mixed.
12. *Lung complications:* Lungs often not involved. Lung complications appear later—the third stage of a cold.
13. *Nervous symptoms:* Not prominent as a rule; not profound. Patient often rests and sleeps well, if nose is not completely stopped up.
14. *Colds:* May be contracted at any time; they are more local, although they may run through a family or a school.
15. *Sequelæ:* Recovery from a single attack is more or less complete. More largely affects the nose, throat, lungs, and the sinuses. Repeated attacks usually required to produce serious after-effects.

Another reason for summoning prompt medical assistance in influenza is to make sure that the disease is properly diagnosed and not confused with cerebro-spinal meningitis; for in the early stages one form of the grippe is almost identical in its symptoms and general manifestations with the early stages of meningitis.

THE TREATMENT OF INFLUENZA

It is popularly supposed that there is very little to be done for the "flu." One must just go to bed and suffer; stick it out, and let the disease run its course of a week or ten days. This is a great mistake. Not only can much be done to shorten the course of the disease and to render the patient more comfortable, but such treatment will also greatly assist in preventing subsequent inflammations and undesirable after-effects.

1. *General treatment.* Put the patient to bed and keep him there until the doctor authorizes him to get up; that is, until the disease is thoroughly eradicated. Stop all solid food, give only fruit juices and gruels for two or three days. Give plenty of water or lemonade, either hot or cold; a glass of liquid every one or two hours when the patient is awake, and oftener if he desires it.

At the onset of the disease, it is well to give a brisk cathartic such as a dose of castor oil, followed

in one or two hours by a dose of epsom salts. The bowels should be promptly and thoroughly washed out by means of several large, warm soap-suds enemas. (See page 67.)

Sweating baths followed by cold-mitten friction, as described under the treatment of the second stage of colds, are also beneficial. (See page 88.)

Hot foot baths in connection with drinking hot lemonade are valuable. (See page 88.)

Do not forget to isolate and quarantine influenza patients. All discharges from the nose, throat, and lungs should be carefully collected and always disinfected.

Keep the feet warm and the head cool: hot water bottles to the feet; cold cloths on the head.

2. *Pain in the back and in the legs.* These pains in various parts of the body may be relieved by very hot foot baths followed by cold-mitten friction. Pains are also greatly relieved by keeping the feet and legs thoroughly warm. They are sometimes greatly relieved by gentle rubbing or stroking of the affected parts.

3. *High fever.* The fever of the grippe is best treated by cooling wet-sheet packs, or by injecting cold water into the bowel. The wet-sheet packs are given as follows: (See Figures 18-20.)

An ordinary sheet is folded from either side toward the middle (see Figure 19) and then wrung



Figure 18 (upper, left) shows the method of wringing the sheet.
 Figure 19 (upper, right) illustrates the folding of the sheet.
 Figure 20 (below) shows the pack applied and covered with blankets



Figures 18, 19, 20—*The Wet-Sheet Pack*



Figure 21—*The Light Treatment for Colds*

quite dry out of cold water or ice water. It really requires two persons to wring the sheet. (See Figure 18.) While the patient is rolled over on one side, the properly folded wet sheet is placed in the middle of the bed. The patient is quickly returned to his back, and, with the arms extended above his head, one side of the sheet is quickly drawn over the chest and abdomen and snugly wrapped around the leg on that side. The arms are now quickly brought down to the sides, and the other side of the sheet is brought over the chest and arms, snugly tucked about the neck, and wrapped about the other leg. Before all this procedure, dry blankets were prepared on the bed underneath the wet sheet, and these are now quickly brought over the patient. In a very few moments the sufferer begins to feel much better; the fever is quickly reduced; the patient rests better, often falling asleep immediately after one of these packs. (See Figure 20.) The wet-sheet pack not only lowers the temperature, but also greatly lessens all the nervous symptoms of the patient. These packs can be repeated two or three times if necessary. The worst cases of fever are usually controlled by giving one or two packs twice daily.

4. *Severe headaches.* When ordinary, generous cold compresses about the head, face, and neck do not control headache, it will be found best to give

alternate hot and cold compresses to the head and face. Fomentations to the face, especially over the eyes, are often helpful. Protect the eyes with pledgets of cotton or by smaller cold cloths. Fomentations should be given in accordance with directions noted elsewhere. (See chapter on Treatment of Different Stages of a Cold, page 94.)

5. *How to combat pneumonia.* The important thing in the treatment of influenza, aside from serious complications, is the prevention of pneumonia, and this may be effectually combated by the following means:

a. Hot fomentations to the chest, front and back, followed by cold-mitten friction. Three changes of hot cloths are made, and then one cold friction rub is given. This procedure should be repeated every three to six hours, depending on the severity of lung complications.

b. In every way possible, keep the blood circulating in the skin. Keep the patient warm. This does not necessarily mean that he must breathe polluted and overheated air. The patient can be surrounded by hot water bottles and properly covered, while plenty of fresh air is admitted to the sick-room at all times.

c. Pay special attention to keeping the feet and legs warm. If necessary, put extra clothing on the lower extremities.

d. See that the chest is kept properly covered, and that the shoulders are not exposed. If the patient tries to sit up in bed, later in the disease, see that warm shirts or jackets are put on.

e. Provide the patient with plenty of fresh air day and night.

6. The use of drugs. Very little medicine is given by most physicians in influenza. Where it is possible to secure a physician, this matter as well as other phases of treatment should be left entirely in his hands. For throat gargles and nose sprays, I cannot do better than refer to the prescriptions recommended for the treatment of colds. (See pages 56, 81, 84, 92.)

In severe attacks of the grippe accompanied by unusual headache and great pain, use the foregoing treatments; remember also that considerable relief is usually obtained from the use of aspirin, given in five-grain doses, every five hours for the first two or three days. It is not advisable to keep up the use of this medicine longer in ordinary cases.

7. Convalescence. Too much emphasis cannot be laid upon the necessity of staying in bed with the grippe until one is entirely well. Do not make the fatal mistake of getting up too soon. Time and money will be saved by taking two or three weeks, if necessary, to get well. Don't go back to work or about your duties until you feel quite strong. It

is a fatal mistake to undertake one's regular work while one is still weak and wabbly from an attack of the grippe. Such presumption is likely to be punished later with attacks of nervous disorders, kidney trouble, and even heart difficulties.

CHAPTER IX

CHRONIC CATARRH AND COUGHS

REPEATED colds, influenza, grippe, and like maladies, among other legacies and after-effects, not infrequently bequeath to their victims a chronic nasal catarrh or a persistent and troublesome cough that hangs on indefinitely.

CHRONIC NASAL CATARRH

A fresh cold in the head may very properly be called an acute nasal catarrh. When these colds in the head follow one another in such rapid succession that a new cold appears on the scene before its victim has fully recovered from the preceding attack; when colds come so thick and fast that the individual is never without one; is always suffering; then we may look upon the condition as one of *chronic nasal infection*.

The cause, then, of chronic infection is frequent and repeated attacks of acute catarrh—colds in the head. The treatment of chronic infection is simply the prevention and cure of common colds. The reader is referred to the chapters devoted to the cure of colds, especially to the advice given re-

specting the treatment of the second or moist stage of colds. (See pages 88-93.)

In the treatment of chronic nasal infection, every effort should be put forth to cultivate the general health and increase the vital resistance. Careful attention to the stomach and bowels, hot and cold baths for the promotion of the skin circulation, deep-breathing exercises, abundant water drinking, the outdoor life—plenty of fresh air and sunshine, together with proper physical exercise—are all concerned in the successful treatment and permanent cure of catarrh. Of course, it is equally necessary that the nose and throat should be carefully examined, and that all abnormalities there found be removed or corrected. Any method of treatment or mode of living that will enable one to rise above common colds will eventually effect his deliverance from chronic infection.

There is a stage of chronic catarrh known as *ozena*, more particularly affecting young men and women, which is characterized by an extraordinarily dry state of the nostrils. This condition is usually preceded by several years of chronic infection accompanied by a profuse and purulent discharge. *Ozena* is characterized by an extraordinarily foul and offensive breath—sometimes so bad as to fill the whole room with its odor. Large crusts form in the nose and the condition is alto-

gether distressing and embarrassing. It is best treated by means of alternating hot and cold douching with some antiseptic and alkaline solution. A good solution for this purpose can be made by taking equal parts of common table salt, sodium borate, and sodium bicarbonate. Thoroughly mix these three salts and then use one teaspoonful of this powder to a pint of water.

PATENT MEDICINES AND DRUGS

I desire to emphasize the uselessness and harmfulness of the vast number of catarrh cures, cough mixtures, and other patent nostrums in the treatment of colds and infections. There are no "sure fire" cold cures.

Let me express a warning against the so-called cold cures, quinin and whiskey, and acetanilid and other coal-tar preparations. While these medicines may sometimes mask the symptoms and afford temporary relief, it is always at the expense of future recurrence and increased debility, with lowered resistance on the part of the body. Colds and infections simply concern the circulation of the blood, the accumulation of poisons within the body, and germs; and as means of their relief and management, drugs are quite useless, except in the form of throat gargles, cathartics, and local applications to the nose. Quinin and similar drugs

check the oxidation or burning up of poisons in the body, depress the circulation, lower the temperature, lessen perspiration, and diminish the activity of the white blood cells in their work of destroying the infectious germs.

There are numerous complications and situations connected with the treatment of colds which may often lead the family physician to prescribe certain useful medicines. I am not in any way agitating against the scientific use of drugs. It is the "patent nostrums," "cold cures," "catarrh cures," and other "quack medicines" that we are decrying. When you take medicine in any form, have your doctor prescribe it for you.

There is no sure preventive of colds. The best of us will have an attack now and then. Our purpose in this volume is to point out the causes which lead up to colds, to urge their prevention, and to offer practical and scientific suggestions for their treatment.

THE CAUSE AND CURE OF COUGHS

Coughs are a distressing accompaniment of many colds, especially when they have a tendency to settle upon the lungs. Coughing is a symptom of many and varied conditions which may affect the throat and lungs, and may be one of the symptoms of such grave diseases as bronchitis, pleurisy,

pneumonia, or even tuberculosis. Whooping-cough is so well known from its characteristic *whoop* that there is little danger of confusing it with coughs due to other causes.

There are numerous causes, outside of the throat and lungs, which may be responsible for an acute or chronic cough. Hardened wax in the ear often produces coughs in children, as well as dizziness in adults. An elongated or relaxed uvula may also be responsible for spasmodic coughing. Other common conditions responsible for chronic coughing are constipation, intestinal worms, dyspepsia, and liver disorders. It is well known that coughing is also often associated with excessive drinking of alcoholic liquors.

Coughing frequently follows attacks of the grippe. If it is long persistent, it becomes a serious symptom indicating general debility. In children, persistent coughing is frequently associated with adenoids and enlarged tonsils. It cannot be denied that "suggestion," that is, the state of the mind, may have much to do with perpetuating a tendency to cough. If we hear a person cough, we ourselves almost instinctively have a desire to cough. It has been found that the victims of chronic coughs are able to exercise considerable control over this affection by the direct exertion of their own wills; that is, if one makes up his mind

to stop coughing, his determination proves to be of great assistance in overcoming even the most troublesome and chronic coughs.

If the lungs are producing large quantities of mucus or muco-purulent matter, the cough should be welcomed. Productive coughs serve a useful purpose in Nature's efforts to recover from various diseases affecting the lungs. The objectionable coughs, which we especially desire to treat and cure, are the dry, hacking, unproductive coughs. Coughing is frequently controlled by steam inhalation, or by breathing the fumes arising from a small basin of boiling-hot water to which one-half teaspoonful of compound tincture of benzoin has been added.

A good prescription for persistent and troublesome tight coughing is the following:

Potassium iodid	10 grains
Potassium citrate	5 drams
Potassium acetate	5 drams
Water	4 ounces.

Mix and label: Take one teaspoonful in a half-cup of water once an hour until the cough is well loosened.

Hot and cold sponging of the chest, the wearing of the throat compress as described on page 86, or the wearing of the chest pack as suggested for colds

on the lungs (see page 96), are all exceedingly useful in the control and cure of chronic coughs.

The following compound will be found of special value in relieving cough in infants or young children:

Steep two tablespoonfuls of flaxseed in a small quantity of water. Flavor with the juice of one lemon and sweeten with a little rock candy. The mixture when finished should be of creamy consistency, and may be given freely.

HAY FEVER

Hay fever is a troublesome affection of the respiratory mucous membrane due to the inhalation of the pollen from numerous plants, such as the ragweed. Hay fever may also be caused by inhalation of the odors arising from various animals. There really seems to be a true and false hay fever, the true hay fever being produced alone by the inhalation of pollen, while false hay fever may be produced by certain diseases, deformities, and irritations of the nasal mucous membrane.

One thing seems quite certain. Nearly all victims of hay fever are more or less *neurotic*; that is, the nervous system is more or less lowered in tone or otherwise weakened. In some highly nervous individuals, it may even be possible that the imagination plays a considerable part in many of their

attacks of sneezing, and other characteristic hay fever manifestations.

All efforts directed toward the prevention of hay fever should make provision for the thoroughgoing treatment of the nervous system, improvement of the digestion, and the relief of any irritating or inflammatory disease of the nose and throat. Crooked nasal septums, enlarged turbinates, and so on, should be thoroughly corrected before the approach of the hay fever season. (See Figure 1.)

In recent years, hay fever vaccines have been developed, but they have not proved altogether satisfactory. In spite of all that can be done, some sufferers from this annoying malady are unable to gain relief except by a journey to some special climate, notably some of the eastern mountains, or the shores of Lake Superior or Lake Huron.

Sometimes, by the use of some simple smelling salts, hay fever attacks may be aborted, or greatly lessened in severity. A useful smelling salt for this purpose is the following:

Carbolic acid	30 drops
Ammonium carbonate	1 ounce
Charcoal powder	1 ounce
Lavender oil	20 drops
Comp. tincture of benzoin	$\frac{1}{2}$ ounce.

Other disorders of the respiratory apparatus frequently associated with hay fever, such as asthma, etc., should always receive the attention of a competent physician. In fact, the majority of conditions treated in this volume demand medical attention. This book has not been written with the thought of displacing the advice and counsel of the family physician, but rather to supplement it—to serve as a guide book to the patient in effectually and successfully carrying out the orders of his medical adviser.

More recently a large number of specific tests have been devised which make it possible, in the examination of hay fever and asthma patients, to arrive more nearly at a diagnosis as to the exact forms of protein, pollen, or other irritating substances which may be regarded as specific causes of their hay fever or asthmatic attacks. We are now able to test out the patient, not only to ascertain if the numerous pollens may be the cause of trouble, but also as regards such substances as goose feathers, horse dandruff, and the numerous forms of protein associated with different food substances.

Now while this work is more or less in the experimental stage, nevertheless our experience with it the last few years has been very satisfactory, and within a few years this method of diagnosis promises to give us more or less complete and satisfactory

information in at least ninety per cent of these perplexing and distressing cases.

The great value of this improved method of diagnosis is that it furnishes us the clew to the specific treatment. If we discover that a certain form of pollen, or a certain sort of protein, is the cause of an individual's hay fever or asthma, then we can immediately start in with our process of immunization. That is, we begin the procedure of administering very minute doses of this offending substance to the patient, at frequent intervals, gradually increasing the dosage until by and by the patient acquires more or less complete immunity or indifference to this substance. While this method of treatment is proving more and more successful, we are compelled to confess failure in a certain percentage of cases, but it has given the best results, in recent years, of any method of relief heretofore devised, and today offers the greatest possible help to hay fever sufferers—outside of complete change of climate—while it offers the greatest help of any procedure yet devised when it comes to the treatment of certain classes of asthmatic sufferers.

Any nose and throat specialist, or other physician having experience with this sort of tests and in the administration of vaccine and serum treatment, will be found competent to carry a patient

through this regime and to prescribe and administer the necessary treatment which may be indicated by the outcome of this series of tests. As might be expected, however, those more experienced in dealing with these cases will probably secure a higher percentage of successes in carrying out this method of treatment. We are just beginning to learn that sometimes it is necessary to repeat these courses of vaccine treatment every year for five or six years. Whether or not experience in years to come will enable us to perfect the vaccines so as to yield more permanent results remains to be seen.

Frankly, the present-day treatment of hay fever is very unsatisfactory. The vaccine treatment has merely proven to be a valuable aid in some cases, of more or less assistance in all, but the experience of passing years has demonstrated that we cannot look to vaccines in their present state of development for the cure of hay fever. Until the treatment of this troublesome disorder is further improved, there remains the fact that full relief in many cases can only be had by going to some place which is free from the provocative pollens. It begins to look as if our hay-fever victims, who were the original pioneers of the annual summer vacation idea, would continue to make their yearly pilgrimages to their favorite pollen-free resort.

It may be we shall some day find out how to lessen the sensitivity of the respiratory mucous membrane to these influences by chemical methods. It is possible that we are attacking the hay fever problem from the wrong side of the fence. In the meantime there is nothing to do except to take good care of the health, correct as far as possible all nose, throat, and sinus infections or abnormalities, and work for the eradication of the ragweed and other mischief-making plants as they annually overspread vacant lots and other suburban tracts of land; but when, as I have intimated, all is said and done, many of our hay fever victims will only find relief through the practice of their annual seasonal migrations.

CHAPTER X

RECENT VIEWS OF COLDS AND THEIR TREATMENT

AS regards the general principles and methods of preventing and treating colds, we have to confess that little progress has been made in the last dozen years, or since the manuscript for the earlier editions of this work was prepared. On the whole, the methods I follow are much the same as those so fully outlined in the earlier chapters of this volume. The information which has accrued from additional experience, and the newer suggestions regarding the management of colds, bronchitis, influenza, and like maladies are embodied in this chapter.

It should be emphasized that humidity is an important feature in the prevention and treatment of colds. Lack of moisture in the air of working and living rooms has much to do with drying up the mucous membranes of the nose, throat, and lungs, and thus predisposing to infection and inflammation. Any influences, whether arising within the body or due to external causes, which produce a dryness of the nose and throat are sure to predispose to catching cold. This is a vital

principle which it is important to bear in mind in the study of the causes of common colds.

SINUS INFECTIONS

The routine employment of the X-ray in taking pictures of the sinuses—the air spaces of the head—together with improved methods of sinus illumination, has served clearly to show that many of our older cases of so-called “chronic colds” in the head were nothing more nor less than sinus infections—pus in one or more of these air spaces or cavities in the head surrounding the nose, within the cheek bones, at the root of the nose, or at the lower part of the forehead just between the eyes. These sinuses are illustrated in the frontispiece (Figure 1) and will not here be described in detail. Very often these chronic sinus infections will yield readily to the frequent application, to the nasal chamber, of certain medicines which have a tendency to shrink the swollen and congested mucous membranes of the nasal cavity, and thus permit the openings leading to these sinuses, which have been closed by congestion, to reestablish the drainage of the infection from the sinus cavity. It is hardly likely, except in unusual cases, that a patient would be warranted in trying to administer such treatment, and specialists practicing in this field use many different prescriptions. One

commonly used, which is given here as a suggestion to the reader—one which I have found most efficient in my practice—is the following:

Ephedrin, one per cent solution in light mineral oil. Use in atomizer or with medicine dropper.

This ephedrin inhalant will contract the mucous membrane of the nose very acceptably in acute colds and sinus infections.

The head should be elevated at night by two or more pillows, in order that normal drainage may be the better encouraged.

Many cases of sinus infection have been produced by the rupture of an infected tooth—that is, a pus sac at the base of a dead or diseased tooth bores around until it infects the sinus. Its proper treatment and care entails the removal of the tooth, and treatment of the sinus infection with drainage through this dental channel.

Surgical interference may be necessary in the more persistent cases. This is usually done by draining through the nasal cavity so that no external wound is made and no scar is left.

The infectiousness or transmissibility of colds is becoming generally recognized. In the case of a school where toothbrushes were kept in a rack, it was found that the colds progressed from one in-

dividual to another in exact ratio to the position in which the children's toothbrushes were placed in the rack above the washbowl.

INFECTED TEETH

If we take X-ray pictures of devitalized teeth, at least those that have been crowned for a number of years, we find the vast majority of the roots infected. Most of the older fillings of root canals are also found to be defective and to present evidence of more or less infection. A great deal of the rheumatism that used to be charged up to either meat-eating or bad tonsils, we now discover to be due to infected teeth, and it should be remembered that serious infection may exist at the roots of the teeth without producing the usually expected symptom of toothache. You can have rheumatism and other trouble from a bad tooth that has never ached.

Pyorrhea—that disease characterized by softening and loosening of the gums at the margins where they meet with the teeth—is a disease which may be more or less concerned with chronic mouth, throat, and nose infections, and thus indirectly associated with chronic catarrh or colds. The importance of the teeth in this matter of infection has become so recognized in recent years that we never think of making a complete examination of a

patient over sixteen years of age without taking an X-ray of every tooth in the head and submitting these pictures to an expert dentist for an opinion. The modern school of dentistry looks with disfavor upon devitalized teeth, and leans more and more to the employment of removable bridges in place of the old-fashioned stationary, filth-accumulating bridges. Some dentists now believe that all dead or devitalized teeth will sooner or later become infected. Some authorities also believe that the chief service of the toothbrush in the hygiene of the mouth has not so much to do with the preservation of the teeth as with the hardening of the gums. The daily brushing serves as a sort of massage of the gums, to take the place of the hard food which we do not eat, and thus the brushing has a tendency to keep up the circulation in the gums, and so prevents pyorrhea.

NEWER METHODS OF TREATING TONSILS

Thus far I have not seen sufficient results from the newer methods of treating tonsils to warrant the optimism expressed by some authorities. While these methods are adapted to certain individual cases and may be of more or less value in even the average case; while we have used suction, vibratory massage, ultra-violet rays, radium, X-rays, etc., and have found all of them to be of more or less value,

yet they do not take the place of the removal of an organ as useless as the diseased tonsil is when it has long been involved; and the employment of such methods impresses me as being somewhat on the order of treating a diseased appendix instead of removing it by surgical operation. You may help it, but you are treating the diseased organ at the jeopardy of health and life, and sooner or later its removal is nearly always necessitated.

There is no question of the immediate value of the temporary relief to be secured by sucking infectious matter out of the crypts of the tonsil. Neither can there be doubt of the value of vibratory massage or ultra-violet rays in reducing inflammation due to acute tonsillitis, for it must be remembered that many tonsils are not permanently diseased, nor is their functional usefulness fully destroyed by a few inflammatory attacks. Thus it is worth while to undertake to improve and preserve, in a few instances, such sick or only partially destroyed tonsils. But, in my opinion, in those cases of chronic tonsillitis, quinsy sore throat, repeated and recurrent pharyngitis—sore throat—the sooner the thoroughly diseased tonsils are removed, the better it will be for the patient's present and future health.

The turbinates (see Figure 1) may be so enlarged in some cases as to necessitate the removal

of a part of the turbinate itself, but in many cases it is found that this turgescence, or enlargement, may be suitably reduced, at least for many years, by the application of high frequency electricity by the method known as "fulguration." Even if this process of reduction does not prove permanent, it proves very satisfactory for from three to even six or eight years, and certainly affords great relief to the patient. It is a very simple procedure, done under local anesthetic, and requires only a few minutes treatment at two or three sittings to complete the work. It is practically painless.

ASPIRIN IN THE TREATMENT OF COLDS

While I recognize the pain-relieving and quieting value of aspirin and other salicylates in the treatment of colds, grippe, and so on, I greatly deplore the extent to which the public has come to drug itself with this supposedly harmless medicine. In recent years I have come to use this class of drugs very sparingly in the treatment of these catarrhal fever disorders, colds, and the like, not merely because of the effect in deranging digestion, or any influence on heart action if used too extensively, but because of the tendency they have to cause the patient to sweat. There is the ever-present danger that the patient will chill in connection with, or following, these sweats, and we

know that chilling is the one big thing to be avoided at each and every stage of the treatment of a common cold.

I think it would be a safer plan for the average layman to form a resolution not to take aspirin unless it is prescribed for him by a physician. You know we physicians look with great disfavor upon the tendency to prescribe for ourselves. We look with suspicion upon self-drugging even on the part of the profession. I should really hesitate to administer aspirin to myself without at least either carefully weighing the indications, or else seeking the advice of a brother practitioner as to the advisability of taking the drug. If we men of medicine fear to prescribe for ourselves, how much less should the inexperienced and unsuspecting laymen presume repeatedly to dose themselves with such a drug as aspirin, or for that matter with any other active medicinal compound.

VACCINES IN THE TREATMENT OF COLDS

Much was said in the public prints on the subject of vaccines during the last influenza epidemic. However, we are bound to confess that we are "up in the air" as to their value in the epidemic stage of influenza. From my own experience, I could cite many illustrations both for and against the supposed value of influenza vaccines. The fact

that they are more or less a failure, we believe is due to our inability to isolate the real germ that causes epidemic influenza. There exists real doubt as to whether the epidemic form is caused by the Pfeiffer bacillus, as we have heretofore been led to suppose.

But when it comes to the prevention or treatment of common colds by means of vaccines, we have another story to tell. I am quite definitely convinced as to various combined catarrhal vaccines—those containing the vaccines for the strains of common bacteria found in the nose and in association with common colds—that my experience in recent years has been very favorable in the use of these vaccines in preventing common colds. Though I must frankly confess that they do not always succeed; that when the exposure is overwhelming and when the immunity is of exceptionally low grade, colds come in spite of the vaccines. But even then they seem to be less severe and the vaccine serves in some measure to abort the attack, even when it fails wholly to prevent it. And so, from personal experience, and from careful observation in the treatment of a large number of patients, I am forced to recognize that these vaccines are of real value, and I look forward to the day when we may understand more concerning the cause of colds, and may be in position, therefore,

better to perfect this vaccine treatment. In the meantime we can expect only partial results from this form of treatment, as we at present understand and administer it.

Diphtheroid colds. We are coming more and more to recognize that in the case of certain children—and adults, too, for that matter—many sore throats and even colds in the head belong to the diphtheria group; that is, they are caused by some form of diphtheria bacillus. Now in recent years we have come into possession of the means of recognizing this form of sore throat—the Schick test. Your physician can obtain the material for this test—diphtheria toxin—which he can inject just beneath the upper layer of the skin. Your reaction to this injection will determine whether or not you are susceptible to diphtheria, or diphtheroid colds and sore throats. If this test should show that you are susceptible, a small immunizing dose of diphtheria antitoxin can be given, and that trouble will be over for a year or more—possibly for several years. After a few years the test may be made again, and you can determine whether or not your immunity is lasting. Of course, this test is invaluable in determining the susceptibility to diphtheria, and we should appreciate the great advantage of having this scientific means of preventing this dreaded disease of childhood.

Whooping-cough. Closely allied to the subject of coughs and catarrh is that of whooping-cough with its troublesome paroxysms. The reader will be interested in knowing that in recent years there has been perfected a pertussis vaccine whose prompt and proper use will do much toward aborting the severity of this childhood disease. In some cases, after the first administration of this vaccine, the disagreeable coughs with their distressing whoops practically disappear. But even in those cases that are not so wonderfully relieved, the severity of the attack is enormously decreased.

THE LIGHT TREATMENT

In recent years there have been perfected a number of very practical and useful forms of apparatus for administering light treatment in the home (see Figure 21). Heretofore the trouble with using light in the home treatment of these common household disorders was that a light sufficiently powerful to give the desired effects could not be attached to the ordinary electric light socket found in the average home. This difficulty has now been overcome, and practical, inexpensive forms of apparatus can be had which will work perfectly when attached to the electric light socket found in any room of the house. And this light, wisely applied, or used as directed by the family

physician, will be found of great value in treating the earlier stages of colds and sore throats, and of even more help in the third stage, as suggested in former chapters, when the inflammation has a tendency to go down into the lungs or some other internal organ.

These simple lights we now have in the hospitals, and they can quickly be taken to the patient's home. Many physicians are supplied with these newer forms of therapeutic light for home treatment, and can furnish them and direct their use by the patient as required.

Light is a very penetrating form of heat and is much to be preferred, when it is available, to the use of moist heat—fomentations and other methods of treatment suggested in former chapters—all of which are more or less associated with the danger or tendency to chill. The danger of "chilling" has always been an objection to the employment of moist heat, such as steam, hot fomentations, and the like. Now we have, in the form of light which can be used in the patient's home, a method of securing a more valuable, penetrating, uniform, and at the same time a more thoroughly controlled form of heat administration.

My attention has more recently been called to a new device which has been lately perfected for automatically controlling the administration

of this form of light and heat—an attachment that can be so adjusted that the heat automatically goes on and off, thus enabling the patient to have long periods of light treatment without overheating, or burning, and without requiring the constant service and attention of an attendant, which cannot be accomplished with the ordinary light.

RHEUMATISM AND CONSTIPATION

Years ago, rheumatism was thought to result largely from errors in diet, with the possible contributing factors of cold and exposure. Now rheumatism is known to be the result of so-called “focal infections”—that is, infections of the tonsils, adenoids, teeth, and sinuses. Even pyorrhea may cause rheumatism, as also may infections of the gall bladder, appendix, Fallopian tubes, together with ulcers of the stomach and bowel—in fact, any form of infection—wherever pus may be harbored in the body, from which focus of infection the toxins and microbes may go forth to settle in the joints and other parts of the body to produce rheumatism, neuritis, neuralgia, lumbago, sciatica, and similar complaints.

In a former chapter attention has been called to overeating and its possible relation to colds. It should be emphasized that mischief is wrought in these cases where the overfeeding has directly to

do with causing increased fermentation of food products in the digestive system. It is in this way that the treatment of constipation becomes one of great importance in the management of chronic colds. If we would overcome the tendency to recurrent colds we must, in the majority of cases, secure free and frequent bowel action. In recent years I have found it a great help, in those persons of lowered vitality—individuals more or less debilitated and subject to frequent colds—I say, I have found it of great help to secure a regular bowel movement twice each day. Of course, it is needless to add that it is unwise to depend either upon cathartics or enemas to secure proper bowel action, though mineral oil, agar-agar, and bran are useful remedies—remedies which can be used indefinitely without in any way harming the bowel or establishing so-called “habits,” unless in the case of colitis or catarrh of the bowel, in which bran will have to be used with discretion.

ACIDEMIA IN RELATION TO COLDS

In recent years, careful study of colds, influenza, and the like, has convinced me that during and previous to these infections, the body fluids are usually lowered in alkali, and it has become our practice the last few years to administer some form of alkali, methodically, in the early hours of a threat-

ened cold or attack of influenza. The alkalies are administered after the following general method: We have the patient take a glassful of lemonade every two hours, to which a quarter of a teaspoonful of baking soda has been added; or we may prescribe one or two grams of sodium citrate in lemon or orange syrup, to be taken diluted with a glassful of water every two hours.

The liberal use of fluid is important in all cases of this, as well as of other fevers. From one-half to one tumblerful should be given every hour while the patient is awake. It may generally be prescribed in the form of liquid diet, given every two hours, and a fruit drink (lemonade, orangeade, grape or raspberry juice and water) every two hours, alternating with the diet.

But the use of some form of alkali (soda), while it is of value as an immediate treatment when coming down with a bad cold, cannot be depended upon indefinitely to keep the acidity of the system down. It should be explained in this connection that when a fresh specimen of urine is analyzed, in the average person, it yields, according to the standard method of testing it, an acidity that is spoken of as 30 degrees. Now, in connection with a cold, it is not uncommon to find acidity anywhere from 50 degrees to 100 degrees, or higher. When it comes to the question of prevention of colds (as

concerns acidity) it is always necessary to depend upon the diet. In this connection, it is well to call the attention of the reader to the fact that all the foods we eat are burned up in the body and form either an acid or an alkaline ash. That is, the end-products of metabolism are either acid or alkaline. The following classification of foods will show at a glance those which contribute to increasing or lessening acidity. Fats and sugars are practically negative in this respect and are therefore not included in the classification.

FOODS WHICH DECREASE THE ALKALI RESERVE

1. *Animal foods.* All forms of flesh foods, fish, and fowl, including all kinds of meat broths, soups, beef tea, bouillon, and the like.

2. *Eggs.*

3. *Breadstuffs:* All kinds of breads, whether made of wheat, rye, or corn; crackers, toasts, griddle cakes, and similar foods.

4. *Pastries:* All sorts of pies and cakes (except fruit pies and other desserts containing milk or sour fruits).

5. *Cereals:* Rice, oatmeal, and breakfast foods of all kinds, including flaked and toasted breakfast foods.

6. *Miscellaneous:* Peanuts, plums, prunes, and cranberries. (Plums and cranberries come under

this heading because of their benzoic acid, which the body cannot fully oxidize.)

It should be noted that this group of foods which are influential in decreasing alkalinity contain none of the commonly understood acid foods, such as the sour fruits, etc.

FOODS WHICH INCREASE THE ALKALI RESERVE

1. *Dairy products:* Milk, ice cream, cottage cheese, buttermilk, and the like.

2. *Soups:* All forms of vegetable and fruit soups and broths.

3. *Fruit juices:* All the fresh fruit juices (except plum juice).

4. *Fresh fruits:* All fresh fruits—sweet and sour—(except plums and cranberries).

5. *Dried fruits:* All dried fruits (except prunes)—especially figs, raisins, dates and currants.

6. *Vegetables:* All kinds—especially beets, carrots, celery, and lettuce.

7. *The legumes:* Beans, peas, and lentils.

8. *Nuts:* All the nuts come under this heading, including almonds and chestnuts.

9. *Miscellaneous:* Potatoes and bananas.

We should not for one moment feel called upon to discard the foods that form an acid ash. They are good foods, but those who are victims of a ca-

tarrhal tendency of the mucous membranes, those who are subject to chronic colds, should see to it that they eat more liberally of those foods which form an alkaline ash. In this way they will materially help to maintain a better resistance to these distressing chronic or acute recurring infections.

"HARDENING" BATHS

The various processes of hardening the system against colds are useful in the average robust individual. Cold baths taken in the morning are useful, as previously indicated, in fortifying the circulation to resist certain chilling influences. It must not be forgotten that chilling nearly always goes with the onset of an attack of cold or influenza. Hardening is a good method while in robust health, but don't attempt any foolhardy method of this sort after the cold has arrived. In health we may expose ourselves to hardening, roughening procedures, but after a cold has been contracted the individual should be "coddled" in every sense of the word. We must do everything possible to prevent chilling, and this is why the patient who has a cold, and has fever at the same time, should be kept absolutely in bed. He should not be permitted to leave the bed even to go to the toilet. The bed pan or urinal should be employed, and while the fever lasts—especially the first three days—the

patient should be confined strictly and continually to the bed. It cannot be too strongly emphasized that the one important thing to bear in mind at every stage of the treatment of common colds is to take every precaution to *prevent chilling*.

THE LAST INFLUENZA EPIDEMIC

As medical men had anticipated and had predicted, a world epidemic of the influenza struck us during the winter of 1919-20. It may be looked for again about 1950. It comes regularly about every thirty years. While we have sporadic attacks of influenza between epidemics, the immunity that follows a world-wide epidemic is usually sufficient to protect one generation against another such outbreak. That is, after it thus sweeps over the world, those who survive have acquired more or less immunity. Those who were highly susceptible are, in most cases, dead. Then we have the ordinary grippe, influenza, catarrhal fever, and common colds, with us for another period of thirty years, until another non-immune generation grows up. Then the stage is set some autumn, as soon as the inclement weather arrives, for the epidemic to spread over the world, governed in its range only by the rate of travel.

The last epidemic was characterized by an unusual feature, a peculiar and tremendously fatal

form of pneumonia. And yet it was hardly a pneumonia. The patients simply filled up with a serum in the lungs and were literally drowned in their own secretions. It seemed that the more hardy the patients, the more certain they were to perish. The vast majority between the ages of twenty to forty, who had this double pneumonia, died. The younger and the older seemed to fare better; but in my experience, in the latter part of the epidemic, after we resorted to enormous doses of atropin, many of these pneumonia cases were saved. But we are not likely to see, in the next twenty-five years or more, another such recurrence of influenza—another such world-plague.

After all, very little was learned as to the improved treatment or management of epidemic influenza. One or two forms of vaccine were tried, but the results, when all taken into consideration, were more or less indifferent. In one case where I had administered influenza vaccine to some four or five hundred resident students in an educational institution, the results seemed to be very encouraging. But perhaps the other phases of the strict regime of quarantine, prophylaxis, not to mention possible immunity, are deserving of equal credit for the favorable results apparently secured.

Influenza still baffles us. Every year or so the newspapers carry the headlines that someone has

found the influenza microbe. It has been perennially discovered for the last three decades, but it is doubtful if the real cause is as yet known.

CATARRHAL FEVER

It has been suggested by someone that we should take influenza, grippe, and common colds, put them in a class, and call the whole group *catarrhal fever*. In my opinion this seems the sensible thing to do, for we must frankly admit that we are frequently confronted with the case of a patient coming down with an infection and neither from the early symptoms, nor from observing it for a number of days, are we able to say honestly whether we are dealing with a case of influenza or grippe, or whether the patient simply has a severe common cold. Some day we may have these processes more scientifically classified, after we have found out more about their germ-causes. All we can say now is that these colds are caused by one or more forms of "virus," but whether this virus is always some form of bacillus and its toxins, or whether there are other and as yet undiscovered ultra-microscopic living or chemical bodies which can cause these colds, after the fashion of pollen irritation as the cause of hay fever, we do not know. We are all looking for more light as to the cause of colds, and better methods of treatment will prob-

ably have to await further discoveries in this particular direction.

It should be understood that the microbes found in connection with ordinary colds are of a very common sort—they are almost everywhere present and may be found almost any time on the healthy mucous membrane of the nose and throat of the average individual, so that the cause of colds, be it "virus," whether living or chemical, seems to be always present with us. The trouble is that colds belong to that group of diseases which, like diphtheria, confer but a short-lived immunity. After an individual has had a cold it is almost impossible to give him another within anywhere from three months to a year. In some individuals this immunity seems to have vanished within a year. In fact, some persons have an annual cold, and are quite immune between times.

When an individual is confronted with an attack of catarrhal fever (colds, influenza, and so on) there ensues a strenuous struggle for the establishment of immunity. This struggle lasts two or three days and is followed by a more or less dubious period of several days in which the immunity equilibrium of the patient is doubtful and uncertain. It is during this stage that great care must be exercised to prevent trouble in the way of complications such as pneumonia, kidney trouble, and

other distressing and dangerous diseases. The internal organs are always in real danger.

One thing seems certain about the "virus" of colds and influenza. It must be spread from one person to another, and largely through coughing, sneezing, spitting, etc. This is why all persons, not excepting school children, should be isolated when they are coming down with a cold. And may we emphasize here what has previously been mentioned—that is the importance of removing all foci of infection in our effort to prevent recurrence of colds. That is, see that all diseased tonsils, adenoids, nasal polypi, and the like, are removed; that deflected nasal septums are straightened; that enlarged turbinates are shrunken; that everything is done to help the victim of chronic colds to rise above that point in his vital resistance where he is eternally subject to infection on the slightest disturbance of his circulation or digestion.

It should be added, in this connection, as the result of our experience in the last influenza epidemic and the more recent study of colds, that we have less and less faith in throat gargles, liquid antiseptics and the like. They may be of some value in the very early stage of the cold, but their germicidal function is doubtful. Washing the nose out with a solution of warm salt water may be soothing and beneficial. In fact, we know that any-

thing which lessens the pain and dryness of the nasal mucous membrane in the early stage of a cold is helpful. We not infrequently wholly abort the nasal manifestations of a cold by the early application of such shrinking preparations as ephedrin, and if under the direction of a skilled physician even a small amount of adrenalin is added to one or two applications of this substance, at a time when the nose is stopped up, mucous membrane dry, and breathing painful, it has been found to be very helpful in aborting the cold. The influence of these preparations is probably to be explained on the same ground that putting a drop of cocain into an inflamed eye will sometimes stop or remove the inflammation. That is, by relieving the pain the congestion subsides, which suggests that a part of the congestion is not only due to the infection, but that in part, at least, it also results from the reaction of suffering which is directly associated with the pain experience.

We are coming more and more to believe that the sweating or heating procedures associated with a cold exert their beneficial influence not by the mere elimination of poisons by the sweating, but that these heating procedures tend to produce an early and artificial fever, and that it is the heating influence upon the body that hastens the processes of immunization. For we now well understand

that when Nature produces a fever in connection with these infections it is for the purpose of hastening the process of immunization. In other words, the fever—if it does not run too high—is definitely curative in its influence. And this suggests that the keystone of all treatment in these cases is to keep the patient *thoroughly and continually warm*.

Outside of the initial cathartic, which may consist of a dose of salts or of castor oil, I do not believe it wise to continue their use in these various forms of catarrhal fever, and I have already intimated that I deem it unwise extensively to employ such medicines as those which have a tendency to reduce fever, to produce sweating—such as aspirin, antipyrin, and similar drugs.

On the second or third day, if the bowels do not move, I would recommend giving a warm enema in which there has been dissolved a teaspoonful of baking soda to the pint. If it is necessary to give cathartics, I prefer to use some mild laxative like cascara sagrada, of which a teaspoonful or more of the aromatic fluid extract can be given at bedtime.

The most important thing to emphasize is that when a patient has fever he must be confined to bed. In this way, much of the kidney, heart, and life-long organic troubles following severe attacks of catarrhal fever, colds, and so on, may be prevented.



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